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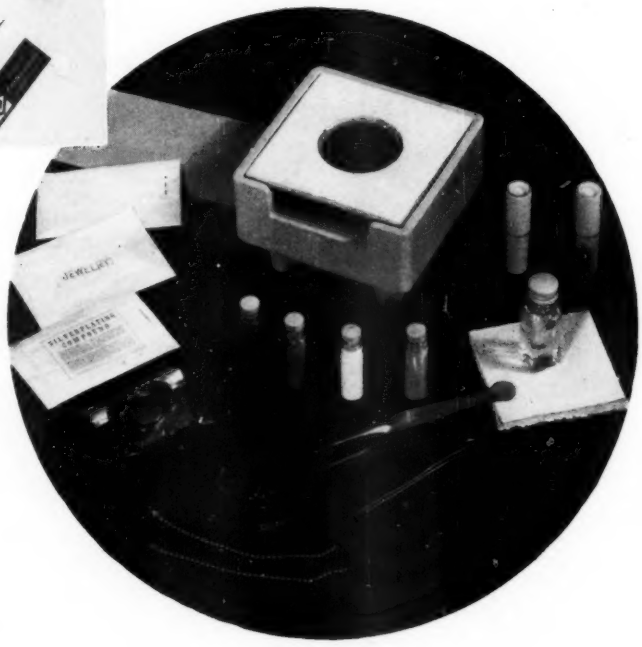

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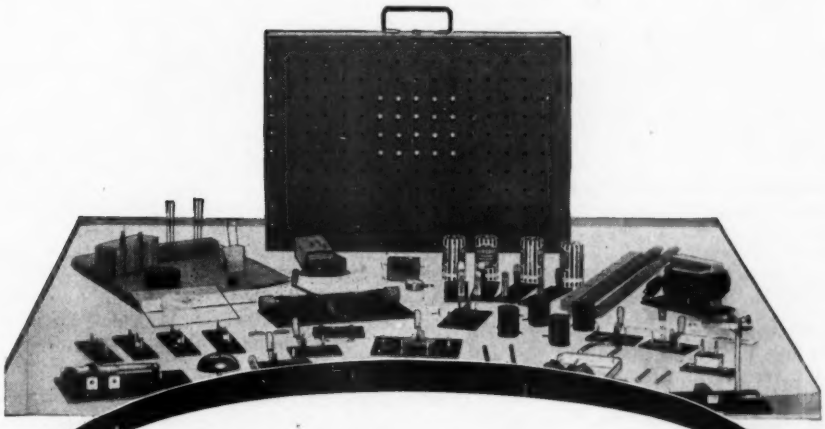

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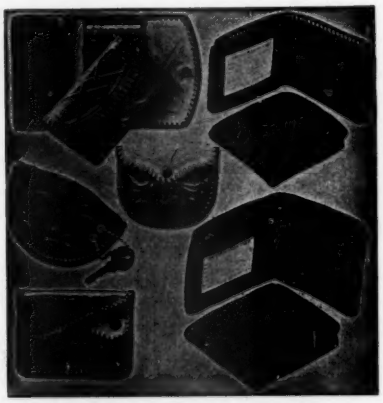

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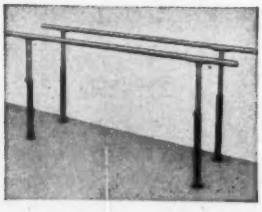

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May-June 1955 Vol. IX, No. 3

AN EVALUATION METHOD FOR CEREBRAL PALSY

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In evaluating patients in the occupational therapy section of the cerebral palsy department at the New York State Rehabilitation Hospital, a motor development test was used for the upper extremities as our principal means of determining a treatment program. Various testing forms have been used over a period of five years; the present test, which has been in use for the past year, is the fourth revision, and it incorporates the best features of the preceding tests along with new items not previously covered. During the period we have been using the motor development test, it has proven of sufficient value that we feel it is worthwhile to present to other therapists for consideration. Our physical therapy section has a comparable motor development test for posture and locomotion, and the two tests complement each other. The items which compose both tests were taken directly from the studies published by Dr. Arnold Gesell and his associates at the Yale Clinic of Child Development.

Need for a motor development test. Occupational therapists have learned from experience that each cerebral palsied patient presents complex problems of evaluation and treatment. It is the therapist's responsibility to determine the patient's chief problem and to set up a treatment program which is correlated with the other therapies. In this process, therapists working with the cerebral palsied have found a need for guideposts to aid in evaluation. Many different types of tests have been devised to determine what each child can and cannot do, and what skills he needs to learn. Many of the tests have certain similarities, but there is evident need for greater uniformity in evaluation so that the results will be more meaningful to all concerned with the patient. In addition, the methods of testing and scoring need to be sufficiently objective so that subjective opinions can be minimized, and the test can be given and interpreted accurately by many different therapists with comparable results. Furthermore, it is important that the test allow for indications of progress and regression. It is fully as important to show loss of skills, if such be the case, as it is to show progress for purposes of determining continued treatment. The tests presented in this paper satisfy all the above requirements.

Reasons for comparison to the normal child. By using items from Gesell, it is apparent we use the development of the normal child as our standard of comparison for the cerebral palsied child. We consider this comparison to be the most valid method of evaluating the patient for a number of reasons.

In the first place, the development of the normal child is considered to be a reliable yardstick for comparison. The development of all normal children proceeds at a fairly uniform rate and in a generally uniform manner, and we are thus using a stable set of standards. For over forty years Dr. Gesell has been investigating and reporting on the patterns of development of the normal child, and his studies are generally accepted as the most complete and the most valid in the field. His test items are standardized and the criteria for testing are specifically stated. Some studies of the development of the cerebral palsied child are in progress, but these studies must be more comprehensive than at present before the results of such tests can be considered truly valid.

Secondly, there is wide individual variability

among cerebral palsied children in contrast to the relative uniformity among normal children. It is difficult to apply standards which will pertain to the whole group classified as cerebral palsied. The wide variations seen are due to the differences in diagnoses and in the severity of involvement, and are also due to the associated defects which may be present. Each diagnosis presents a specific disability picture, as for example the muscle imbalance of the spastic, or the involuntary motion of the athetoid. It seems fruitless to try to compare the spastic and the athetoid, even though they are both classified as cerebral palsied, for these patients are not a homogeneous group. The degree of handicap also varies markedly from patient to patient. Some are so mild that it is questionable whether or not they should be classified as cerebral palsied, while others are so severe that daily existence is a great struggle. In addition, the patients may have associated defects and these defects may be such that they demand primary consideration in evaluating the patient, rather than the neuromuscular picture of cerebral palsy. The additional handicaps may be mental deficiency, emotional problems or personality aberrations as seen in the brain-injured. They may be sensory disabilities disturbing vision or hearing, then again the problems may be epileptic, dental or congenital anomalies.

A third reason for comparing the cerebral palsied to his normal counterpart is that this is done in other disciplines, for example the psychological evaluation of his mental level. Numerous tests have been adapted and devised in order to make the testing of the cerebral palsied child a truer determinant of his intellectual functioning. However, all the modifications serve only to aid in comparing him with the normal child. Since the comparison of his mental level to the normal is so generally accepted, it seems only logical to compare his physical level of accomplishment to the normal.

Lastly, the cerebral palsied child must live to the best of his ability in a normal world. He cannot be relegated to a purely artificial cerebral palsy world, for this does not exist. We consider our patients as children primarily, with varying degrees of handicaps superimposed on what was once potentially a normal child. The goal of all therapists working in rehabilitation is to assist the patient so he can live as near normal a life as possible. Since this is our goal, we feel justified in evaluating the cerebral palsied child to determine how he measures up to the child he might have been.

In summary, our reasons for a motor development test, which compares our patients with their normal counterpart, are: (1) The validity of normative studies. (2) The almost complete impossibility of comparing the cerebral palsied with another cerebral palsied child. (3) The correlation of mental and physical determinants. (4) The necessity for the cerebral palsied to live in a normal world.

Areas of development covered by the test. The areas of normal development which are considered in our test are: hand use, feeding, dressing, grooming and pre-writing. These categories represent the basic skills necessary for self-care. Since these skills require the use of the upper extremities almost exclusively, it is rightly the province of the occupational therapist to test them. The test items chronologically cover the period of child development from infancy through age six years. We are therefore testing manual skills from their earliest beginnings when the infant barely notices his hands up to the period when he has mastered all the basic skills needed for self-care, and is physically and intellectually ready for the first grade in school. A review of the accomplishments of the average six year old will quickly emphasize the amazing skill and dexterity he possesses. His drawings are recognizable, he can print, do simple carpentry, and he has been able to feed himself with a fork for two years, and has been dressing himself for a year. We consider it unnecessary to test skills beyond this age level since talent and inherent ability play a large part in further refinement of motion. More complex demonstrations of manual dexterity are tested at the proper age as a part of pre-vocational exploration, but that subject is beyond the scope of this paper.

Selection of test items. The test items have been chosen so that progressive steps are provided which lead to independent performance in the areas of hand use, feeding, dressing, grooming and pre-writing. The category entitled "hand use" is actually the forerunner of all the activities of daily living, and the items listed test most of the range of motions needed for these.

In testing a child's ability to perform activities, such as feeding, it is important to determine not so much that he can or cannot eat, but why he can or cannot eat. In other words, by the time a child is able to feed himself independently, he has spent many months developing the movements that make up feeding. For this reason the test items are broken down into the steps that precede independent feeding. At three months he is able to maintain grasp. At six months he reaches purposefully. At nine months he is able to bring his hand to his mouth and feed himself a cracker. At twelve months he can grasp a spoon and chew his food. At 18 months he can fill the spoon with food. At two years he can feed himself with a spoon although apt to spill some. Thus a child is tested on all these components. Perhaps he can grasp the spoon and even take it to his mouth,

but is unable to fill the spoon with food. This, therefore, is the starting point for training, and training will continue until he can successfully pass the three year item of feeding himself with little spilling. Such step by step testing and subsequent training follows through with all the other modalities of dressing, grooming and writing. Keeping the progression in mind, it is probably easier to look at the test and see the reasoning behind the selection of the items. If there is still doubt about the items, reference to Gesell's work (see bibliography) will emphasize the validity of them.

Scoring. The system of scoring is similar to that used in the standard psychometric tests. "Basal age" refers to the age at which the child passes every item normally. "Equivalent level of normal accomplishment" refers to the total number of months credited for all the items that the child can do in a normal manner. "Functional level of accomplishment" means the total number of months credited for all the items passed normally and, in addition, all the items performed independently, but which are done awkwardly or painstakingly. The "level of highest normal accomplishment" refers to the highest age at which the child can perform at least one or more items normally.

The test is given to each patient every three months and each test is scored on the test form with the appropriate numeral for that test. For example, all items passed in the first test are indicated by number 1, all items passed in the second test by number 2, and so forth.

Method of testing. Our test covers 66 items, which at first glance may seem like a great many items. It would be consequently assumed that to give the test would consume a great deal of time. However, we have not found this to be the case. When we do the actual testing we usually try to do all the items in the same location or all of the items that relate to each other. Secondly, we know when we see the child how old he is and can thus tell what would be the highest item he is expected to pass. Finally, the child whose physical capabilities coincide fairly closely to his age level will naturally take longer to test than the child who is severely involved and can perform practically none of the items.

Summary. The test tells us what we may expect of any child of a certain age and, perhaps more important, tells us what we cannot expect a child to do. We know that it is foolish to expect a four year old to dress himself completely or print his name for we must wait until he is psychologically and physiologically a six year old before he can perform the necessary tasks.

The test also points up the stages of maturation along which all children must progress. Each child grows at his own rate, but all children follow the same steps of progression in the development of upper extremity skills. A child who does not have voluntary release cannot be expected to build a tower of blocks or put pegs in a hole. Release, a one year item, must be mastered before he can succeed at the other items which are at the 18 month level.

Since using the test our results have provided us with a valuable guide in determining the program for the child. The doctors also value the test for it aids them in directing our efforts, in evaluating the rate of progress and in determining the ultimate prognosis of each patient.

Explanation of items. It is important to remember when testing a child on the items listed below his chronological age that his performance at that low age level is compared to the normal, not at his own age level. In other words, in testing a five year old child on a two year item, compare his performance with that of a two year old normal child, and not that of a normal five year old performing a two year old activity.

Three months

No. 2. *Arms activate on sight of toy*

The infant does not yet have the ability to move his arms towards an object, but he can see it and becomes motivated by the toy.

No. 3. *Symmetrical head and arm posture*

By this time he has overcome the newborn posture of the tonic neck reflex (head turned toward the extended arm; opposite arm flexed). This was felt to be an important item to test since some cerebral palsied are still dominated by this posture, and it can be an interfering factor with later feeding training.

Six months

No. 4. *Reaches purposefully*

The child exhibits elbow extension and shoulder flexion; however, he still lacks trunk balance, so if the object for which he is reaching is too far away, he cannot obtain it.

No. 6. *Drops object*

Demonstration of ability to extend fingers although involuntary.

Nine months

No. 7. *Extended reach and grasp*

This is quite refined and he is able to move his arms freely and pick up an object with little difficulty.

No. 8. *Opposed grasp*

He now has more control over the thumb including abduction and extension to help open the hand and flexion and beginning opposition to grasp the object.

One year

No. 10. *Voluntary release*

The child can now place an object on a table top.

NEW YORK STATE REHABILITATION HOSPITAL

West Haverstraw, New York

CEREBRAL PALSY DEPARTMENT

MOTOR DEVELOPMENT TEST—Upper Extremities — O. T. Section

NAME: **Bill B.** HANDEDNESS: **Left** BIRTH: **4/31/50**

Scoring:

Initial test scored in black, using No. 1 in appropriate square. Subsequent tests scored in red, using number to indicate test. (2 for the second, 3 for the third, etc.)

Column A—Beginning activity, but unable to complete.

Column B—Accomplishes activity, with some assistance.

Column C—Accomplishes activity, but in more than average time, or in an awkward manner.

Column D—Accomplishes activity within normal limits and within average time.

Column M—Check when patient has reached maximum due to disability.

Only items scored *D* used for scoring normal development. Items scored *C* & *D* used for scoring functioning level. Lesser scores for the benefit of therapists in outlining program.

If apparatus is used, indicate with * and note on back of test sheet a description of equipment used.

TEST RESULTS

DATE	**6/15/54**				
INITIAL	**K.G.**				
TOTALS	1	2	3	4	5
Basal Age	**9 Mos.**				
Equivalent level of normal accomplishment (Composite Score of Column D)	**21 5/6 Mos.**				
Functional level of accomplishment (Composite Score of Columns C & D)	**25 1/2 Mos.**				
Level of highest accomplishment	**4 Yrs.**				

Age Level	ITEMS	A	B	C	D	M
3 *Months*						
Hand Use	1. Holds toy actively (½" peg)				1	
	2. Arms activate on sight of toy				1	
	3. Symmetrical head and arm posture (supine)				1	
6 *Months*						
Hand Use	4. Reaches purposefully				1	
	5. Transfers object				1	
	6. Drops object				1	
9 *Months*						
Hand Use	7. Extended reach and grasp				1	
	8. Opposed grasp				1	
Feeding	9. Finger feeding				1	

Age Level	ITEMS	A	B	C	D	M
1 Year						
Hand Use	10. Voluntary release				1	
	11. Brings one block over another				1	
	12. Deft prehension			1		
	13. Rolls ball imitatively				1	
	14. Puts cube in container				1	
Feeding	15. Grasps spoon				1	
	16. Chews food			1		
Dressing	17. Cooperates with dressing				1	
Writing	18. Contacts paper with crayon				1	
18 Months						
Hand Use	19. Builds 3 block tower (1 inch blocks)		1			
	20. Places peg in hole (1 inch peg)				1	
	21. Turn pages (2 or 3 at a time)				1	
Feeding	22. Fills spoon with food				1	
Dressing	23. Removes socks		1			
Writing	24. Picks up crayon and scribbles.				1	
2 Years						
Hand Use	25. Builds 6 block tower (1" blocks)					
	26. Builds 3 block train	1				
	27. Turn pages (1 at a time)				1	
	28. Throws ball inaccurately				1	
	29. Strings beads (1" beads)			1		
Feeding	30. Drinks from cup			1		
	31. Drinks from glass (2" diameter)			1		
	32. Feeds self with spoon			1		
Dressing	33. Removes shoes (laces undone)				1	
	34. Removes pants (assistance over hips)				1	
Writing	35. Imitates vertical stroke				1	
Grooming	36. Washes and dries hands partially				1	
3 Years						
Hand Use	37. Builds 9 block tower (1" blocks)					
	38. Builds 3, block bridge					
Feeding	39. Feeds self independently		1			
Dressing	40. Unbuttons medium shirt buttons		1			
	41. Unlaces shoes			1		
	42. Removes clothing completely (no back or small fastenings)		1			
	43. Puts on underpants		1			
	44. Puts on socks		1			
	45. Puts on shoes	1				
Writing	46. Imitates horizontal stroke				1	
	47. Copies circle				1	
Grooming	48. Washes and dries hands		1			
4 Years						
Feeding	49. Feeds self with fork		1			
	50. Drinks through paper straw				1	
Dressing	51. Buttons large buttons on shirt		1			
	52. Laces shoes		1			
Writing	53. Copies cross (vertical and horizontal lines)					
Grooming	54. Brushes teeth		1			
	55. Washes and dries face		1			
	56. Takes responsibility for toilet					
5 Years						
Dressing	57. Buttons medium buttons on shirt					
	58. Dresses self (except for bows and small buttons)					
Writing	59. Imitates square					
	60. Draws recognizable man					
6 Years						
Feeding	61. Spreads with knife					
Dressing	62. Ties bows on shoes					
	63. Buttons small buttons on shirt					
Writing	64. Copies printing					
Grooming	65. Combs or brushes hair					
	66. Blows and cleans nose					

SCORE SHEET FOR MOTOR DEVELOPMENT TEST

UPPER EXTREMITIES

Age Level	Value of Each Item	Test No. ———				Test No. ———				Test No. ———				Test No. ———			
		No. Items Passed		Value In Months		No. Items Passed		Value In Months		No. Items Passed		Value In Months		No. Items Passed		Value In Months	
		Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D	Col. D	Col. C & D
3 mos.	1 mos.	3	3	3	3												
6 mos.	1 mos.	3	3	3	3												
9 mos.	1 mos.	3	3	3	3												
1 year	1/3 mos.	7	9	2⅓	3												
13 mos.	1 mos.	4	4	4	4												
2 yrs.	½ mos.	6	10	3	5												
3 yrs.	1 mos.	2	3	2	3												
4 yrs.	1½ mos.	1	1	1½	1½												
5 yrs.	3 mos.																
6 yrs.	2 mos.																
TOTALS				21⅚	25½												

No. 11. *Brings one block over another*

The one year old "is beginning to geometrize space and is able to bring one object momentarily above another, a form of orientation which presages tower building."[1] This item and all subsequent tower building items demonstrate not only his increasing awareness of the vertical, but his general shoulder control as well.

No. 12. *Deft prehension*

Here the child is not only able to oppose the thumb to the fingers, but is also gaining the use of his finger tips as well. "His prehensory patterns are approaching adult facility. His fine prehension is deft and precise . . ."[2]

No. 18. *Contacts paper with crayon*

The child is now beginning the rudiments of writing. He is able to hold the crayon and contact the paper. Later he scribbles and still later he begins to sift through the scribbles and begins drawing actual shapes which are the foundations of reproducing the printed word at six years.

Two years

No. 26. *Builds three block train*

This is not a difficult feat physically. If he can build a three block tower requiring more shoulder and hand control, but cannot reproduce the horizontal train, we are able to get a clearer picture of his mental status.

Explanation of scoring

Basal age: the age at which every item in Column D is passed.

Equivalent level of normal accomplishment: total number of months credited for all the items passed in Column D.

Functional level of accomplishment: total number of months credited for all the items passed in Columns C and D.

Level of highest normal accomplishment: the highest age at which he can perform at least one or more items in Column D.

The amount of months given to each individual item has been determined by the number of items at each age group divided by the number of months between age groups. For example, at the three month level there are three items. Therefore, each item is worth one month. At the one year level there are nine items. There are three months between the nine month level and the twelve month level. Nine items divided by three equals 1/3, so each item is therefore worth 1/3 of a month. If he passes all nine items, multiply nine by 1/3 and the result is three months credit.

Sample situation

Bill, age four years, four months, has been referred to Miss O.T. The doctor has made a diagnosis of athetoid, quadriplegia, moderate involvement. The physical examination shows an essentially normal white male with no pathological signs. Reflexes are normal, no deformities or contractures, slight tightness in all joints. Recommended treatment is to attempt full scale rehabilitation of all activities required of his age. Miss O.T. now has the problem of determining just what her program should be, where to start and what are the more important things to work on first.

Miss O.T.'s guidepost is the motor development test. She administers the test and finds the patient can feed himself but needs further training to improve his technique. He can remove shoes and pants (items at two years) but needs help with dressing at later levels. Pre-writing is at a three year level. Results, following scoring, show his functional motor level at 25 and a half months.

Program after evaluation:

Feeding: aim for a smoother pattern with the left hand

Dressing: aim to remove all clothing independently without braces and with braces on

Hand skills: using coordinating toys and prewriting, aim to improve functional use of hands to diminish overflow to lower extremities.

The above program can be carried out in an in-patient facility where the patient is seen individually daily. In an out-patient set-up the entire program cannot be covered so it would be left to the discretion of the therapist to select the most important skill for self-care during visits to the clinic and set up a home treatment program to cover the remaining activities.

The test is given every three months and with time the test will reveal the child's rate of progress.

With this presentation, we do not wish to intimate we are halting our revisions. We feel that this method has been successful in our set-up. We expose it to many therapists to use and to evaluate with their patients to learn of its broader uses in various set-ups and with various degrees of involvement. We welcome comments pro and con.

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2. *Ibid.*, p. 27.

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THE OPPONENS SPACER

A DEVICE TO FACILITATE FUNCTIONAL OPPOSITION IN THE HAND OF THE CEREBRAL PALSIED OR HEMIPLEGIC CHILD

W. E. LANDMESSER, JR., M.D.[1]
RUTH C. McCRUM, O.T.R.[2]
JOHN C. ALLEN, M.D.[3]

Attainment of thumb-finger opposition in children with central nervous system disorders, other than poliomyelitis, has long been a problem for those working in the orthopedic-pediatric area. Although many appliances have been evolved for the rehabilitation of patients with poliomyelitis, few have been developed which are of use in the habilitation training of the child with cerebral palsy.

A device designated as the *opponens spacer* has been developed at The Newington Home and Hospital for Crippled Children to facilitate opposition in the cerebral palsied or hemiplegic child. In the properly selected case, an adequately fitted spacer enables the child to accomplish opposition of thumb to index finger.[4] The selection of this form of grasp as the objective is supported by the biomechanical studies of the hand carried out by Dr. C. L. Taylor.[5] In modified form, the spacer has been helpful to selected cases of poliomyelitis, Volkmann's ischemic contracture, and peripheral nerve injuries.

The opponens spacer has been so named because it acts as a guide to space the thumb and forefinger in the most functional position for active opposition by the individual patient. Construction is designed to leave unaltered all components of the patient's neuromuscular mechanism. The spacer regulates motion by (1) properly spacing the heads of the first and second metacarpals to regulate adduction; (2) providing a trough to guide the thumb into proper alignment for kinetic opposition; and (3) when necessary, providing a check to interphalangeal flexion, and controlling the effects of subluxation and improper timing.

Standardization of terminology became essential as the spacer developed. The following terms are descriptive of the types of hand disabilities for which the spacer has been found most useful:

(1) Hyper-opposition (Figure 1): the thumb is adducted and flexed across the palm, often to protrude between the fingers.

(3) Hypo-opposition (Figure 2): the thumb is adducted, but not opposed nor flexed across the palm.

(3) Time-space defect: opposition requires that thumb and finger meet at a point in space. In certain hands, either thumb or finger arrives at the theoretical "point of opposition," passes this point, and mal-opposition results.

(4) Subluxation: functional opposition is seriously impaired by unstable metacarpo-phalangeal joints in combination with any of the above.

Two basic patterns for the opponens spacer have been developed. The *opposition block spacer* (Figure 3), for the functional correction of hyper-opposition, maintains first to second metacarpal head spacing against adduction, and blocks the thenar aspect of the thumb to limit flexion across the palm. The *opposition support spacer* (Figure 4), for the functional correction of hypo-opposition, maintains the first to second metacarpal head spacing against adduction, and supports the postero-lateral aspect of the thumb and first metacarpal to establish opposition. Either type may be modified to correct time-space defects or to alleviate the effects of metacarpo-phalangeal subluxation.

Each hand must be individually evaluated. The classification of the disability will determine the type of spacer indicated. For example: a patient with hyper-opposition will require an opposition block spacer; a combination of hypo-opposition and time-space defect would require an opposition support spacer modified to check the index finger (or thumb) at the "point of opposition."

The technique for making and fitting a spacer is presented:

1. A sheet of Permoplast,[6] kneaded to flexibility, is placed over the web area of the patient. The operator regulates first to second metacarpal head distance with his index finger, and supports the base of the thumb with his third and fourth fingers to establish a position of finger-tip prehension. With the patient's index finger and thumb held in opposition (the aid of an assistant may be necessary), the Permoplast is molded about the appropriate structures (Figure 5).

a. The mold for the opposition block spacer covers the entire web area, the thenar aspect of the first meta-

1. Research Fellow, The Newington Home and Hospital for Crippled Children, Newington 11, Connecticut.
2. Director of Occupational Therapy.
3. Chief of Physical Medicine.
4. Synonyms for opposition are finger-tip prehension and finger-tip pinch.
5. Taylor, C. L. *Patterns of Hand Prehension in Common Activities.* Special Technical Report, No. 3, Engineering Prosthetic Research, University of California, Los Angeles, Calif.
6. Permoplast, a product of the American Art Clay Company, Indianapolis, Indiana, is a permanently plastic oil modeling clay.

carpal and thumb, and the head of the second metacarpal and base of the index finger.

b. The mold for the opposition support spacer covers the entire web area, the dorso-lateral aspects of the first metacarpal and thumb, and the head of the second metacarpal and base of the index finger. Either type may be extended to include as much of the index finger as is necessary to correct other defects.

2. The entire hand-Permoplast assembly is immersed in icewater. The Permoplast immediately stiffens and can be worked loose from the patient's hand with little distortion. Removal of the mold under water facilitates separation of skin and Permoplast. If the original shape is at all deformed, it may be restored at this point.

3. The cold Permoplast mold is filled with plaster of Paris, care being taken to avoid distortion of the mold. When the plaster has set, the Permoplast is stripped from

Figure 1. *Hyper-opposition. The thumb is adducted and flexed across the palm, often to protrude between the fingers.*

the plaster model and discarded. The overhanging edges, and all ridges on the working surface of the plaster model should be carefully trimmed.

4. After the plaster model has dried, it is covered with stockinette which is secured with carpet tacks. The working surface of the model must be completely free from wrinkles.

5. A disc of No. 125 Celastic[7] large enough to cover the working surface of the plaster model is moistened in solvent and applied to the model.

One-half inch notches in the disc at finger and thumb facilitate smooth application over the web area. The Celastic is then molded over the remainder of the working surface and held in position by a tightly wrapped elastic bandage. Occasionally, smooth digital application of the Celastic will not be possible. The Celastic must then be forcibly jammed against the smooth plaster surface by a very tightly applied elastic bandage. In the finished product, the skin surface will be smooth, even though the exterior may be wrinkled.

6. When dry, the Celastic shell is removed from the model and the stockinette discarded. Removal is facilitated by trimming the Celastic to the margins of the working surface.

7. The rough spacer is placed on the hand and marked for trimming. Celastic is easily cut with a knife or scalpel. The spacer is best fitted by making a series of adjustments, rather than attempting a complete fitting in one operation. The properly trimmed spacer will not abrade the palm nor the wrist, and those joints of the index finger and thumb not primarily included in the spacer should flex without blocking.

Figure 2. *Hypo-opposition. The thumb is adducted, but not opposed or flexed across the palm.*

8. A functional trial is made with the trimmed spacer applied to the hand with a cloth figure-of-eight strap. Satisfactory opposition should immediately result. If the desired result is not obtained, the spacer has either been improperly trimmed, or the original Permoplast mold was not properly taken. If the spacer is satisfactory, slots are marked at positions indicated by the straps.

9. The spacer is replaced on the plaster model and a second layer of Celastic is applied for reinforcement, using the same technique as employed with the first layer. After drying, the second layer is trimmed, the edges neatly beveled, and the slots, previously located, are cut through.

10. Six coats of flesh-colored lacquer are applied to the trimmed spacer. The first coats tend to raise the nap of the fabric, making it necessary to file any rough spots smooth before applying the finishing coats. The sixth coat produces a smooth, durable and water-resistant finish.

11. The finished spacer is applied to the hand by means of an elastic strap threaded through the slots and secured to a leather wristlet by snap fasteners (Figure 4). For the small child, an alternate method of applying the spacer is with an elastic figure-of-eight strap fastened at the wrist with a snap (Figure 3). Where possible, a leather wristlet is preferable.

These spacers should be made by the physician and the occupational therapist working as a team. Evaluation of the hand disability, determination of the proper type of spacer, taking the Permoplast impression, making the plaster model, and trimming and fitting the spacer are considered to be primarily the responsibility of the doctor. Psychological preparation of the child and parents for the spacer, training both child and parents in the use of the spacer, and periodic performance checks are considered primarily the responsibility of the occupational therapist. The intermediate steps in the fabrication of the spacer—Celastic and leather work, painting, etc.—may be divided or assigned in

7. Celastic, napped cotton flannel impregnated with pyroxylin and a fire-retardant, is a product of the Celastic Corporation, a du Pont subsidiary. When saturated with solvent, the material becomes entirely flaccid, and readily conforms to irregular shapes. Celastic bonds perfectly to itself.

Figure 3. The Opposition Block Spacer for the functional correction of hyper-opposition, maintains first to second metacarpal head spacing against adduction and blocks the thenar aspect of the thumb to limit flexion across the palm. Finished spacers are shown applied by means of elastic figure-of-eight straps.

accordance with the abilities and desires of each team. The actual work time involved per spacer is approximately one hour and fifteen minutes; the approximate cost is fifteen to twenty cents.

As with any appliance, an adjustment period is necessary before full-time use is attained. The spacer should be worn during the waking hours for progressively longer periods until tolerated for a full day. In some cases, redness may appear

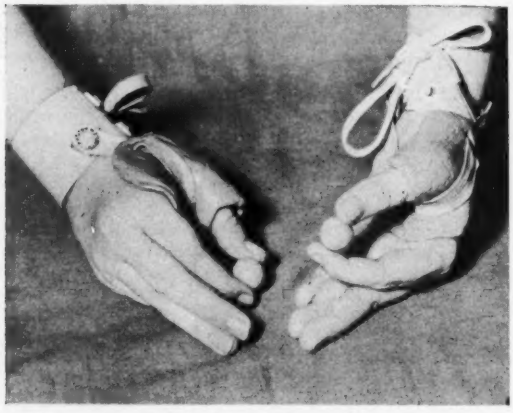

Figure 4. The Opposition Support Spacer, for the functional correction of hypo-opposition, maintains the first to second metacarpal head spacing against adduction and supports the postero-lateral aspect of the thumb and metacarpal to establish the proper degree of opposition. The finished spacers are shown applied by the cuff method.

around the edges of the spacer, but a small callus generally develops. If the irritation is persistent, or pressure areas develop, the spacer has been improperly trimmed, improperly applied, or the original Permoplast mold was not properly taken. Thus far, no cases of sensitivity to the materials used has been encountered. An information and instruction sheet dealing with these matters has been prepared for distribution to the parents of children fitted with spacers.

DISCUSSION

A device to facilitate the attainment of functional opposition in the hand of the cerebral palsied or hemiplegic child has been presented. Since the development of this device in December, 1953, spacers have been applied to forty-four cerebral palsied and hemiplegic children. Thirty-three of these patients have spacers on one hand only; eleven wear spacers on both hands. Twenty-six standard opposition block spacers, eleven standard opposition support spacers, and eighteen modified spacers are in use.

The opponens spacer represents a compromise

Figure 5. Hand-Permoplast assembly ready to immerse in ice-water. Impression for Opposition Block Spacer shown here.

between theoretical and practical considerations. The desirability of maintaining the integrity of the tactile surface of the hand as an orienting factor to reinforce the defective proprioceptive sense of the cerebral palsied patient is acknowledged. However, the authors are of the opinion that the functional opposition made possible by an opponens spacer more than compensates for the loss of the small tactile area covered.

The opponens spacer will occasionally restrict the size of the objects which may be handled. This is especially true when a time-space defect or metacarpo-phalangeal subluxation requires modification of the spacer to include the index finger. The authors feel that, regardless of the size limitations, useful grasp for small objects is far more desirable than no opposition.

Designed solely to enhance finger-tip prehension, the spacer is not adapted to crutches or canes. Use of crutch or cane may necessitate removal of the spacer. However, the method of elastic attachment permits easy removal and replacement of the spacer on the hand.

The opponens spacer may be applied at any age. In the very young, the mentally retarded, or the severely handicapped, the establishment of a functional relationship between thumb and finger is

(*Continued on page* 139)

TRAINING IN THE USE OF THE FUNCTIONAL ASSIST FOR THE FLAIL HAND

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ODON F. VON WERSSOWETZ, M.D., F.A.C.P.
Gonzales Warm Springs Foundation, Gonzales, Texas.

The rehabilitation of a patient with a flail hand is a difficult problem. It becomes tremendously more serious if both hands are flail, as often occurs in neuromuscular diseases or injuries to the spinal cord. In order to cope with this problem, a functional hand assist was developed at Gonzales Warm Springs Foundation.

This apparatus is used when there is no muscle power in the hand at all, but the grip and release are possible by utilizing a muscle group elsewhere in the body for motive power. Meticulous training in the use of this apparatus is a necessity if it is to result in successful rehabilitation.

The purpose of this presentation is to describe these training methods as they were devised for one patient. They will serve as a guide for preparing programs for other patients.

Description of the apparatus. This functional assist is composed of a terminal device, a supporting cuff, and a transmission mechanism. Briefly, the terminal device consists of two metal bars; one is fitted to the side of the hand and thumb as a static prong, and the other is fitted to the index and middle fingers as pincer. This is individually adjusted, as it was found that some patients preferred to have all fingers incorporated. At any rate, the thumb is stabilized; the fingers are mobile en masse. The apparatus restores the prehension, which depends on the ability of the hand to assume the position of function; that is, it depends upon extension and flexion of the digits at the metacarpo-phalangeal joints for grip. The prehension attitude of the two fingers in meeting the thumb is so arranged that it permits the patient the most comprehensive and universal approach to objects of various shapes and sizes, yet provides as secure a grip as possible. The terminal device is attached by an extension of the thumb bar to the thumb cuff, which provides the necessary support. This device is activated for closure by a spring or elastic between the fixed thumb bar and the movable finger prong. For opening, a steel cable transmission system is used. The activating force is transmitted from a harness which may derive its motive power either from shoulders or lower extremities. This appliance has been described in detail elsewhere.[1]

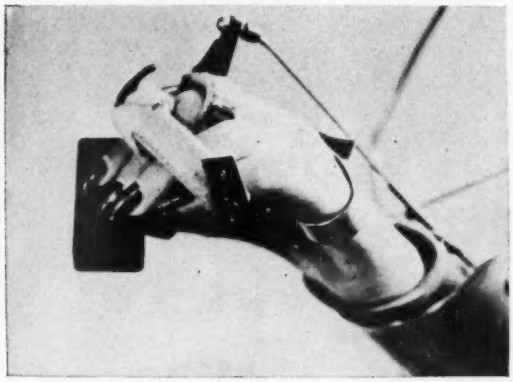
Case history. The patient, B. C., a twenty-two year old white female, developed acute poliomyelitis on October 22, 1952. The neck and shoulders were first affected and two days later the paralysis extended to both upper extremities. Two days following this, it affected the lower extremities, trunk and chest. She was placed in a tank respirator in which she remained until January, 1953, when she was weaned to a rocking bed. This was discontinued three weeks later and she has not had any respiratory difficulty since that time. She received the usual treatment and was discharged home in November, 1953. She received home care until January 14, 1954, when she was admitted to this hospital.

Functional hand assist showing terminal device, supporting cuff and transmission mechanism.

At the time of admission a muscle test revealed that the lower extremities had functional strength only in external rotators; the posterior muscles of the neck had fair power, the left upper trapezius was poor in strength, and the other muscles were between zero and poor minus in strength. Because of this severe muscle weakness, the patient was unable to do anything for herself, other than to turn the pages of a book which she accomplished by holding a page turner in her mouth.

Soon after a preliminary evaluation, it was decided that this patient would require a functional hand assist. This was fitted to her individually. Other aids, including ones for eating, writing, and brushing teeth, were adequate for specific activities, but they did not provide prehension for her and necessitated special apparatus for each activity.

1. Witt, R. N. and von Werssowetz, Odon, F., M.D., F.A.C.P. "Functional Hand Assist," *Orth. Prosth. Appl. J.*, (OALMA) 8: June 25, 1954.



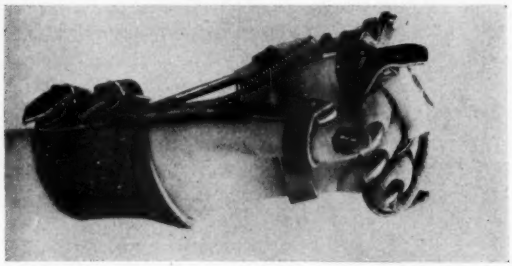
Lateral side of functional hand assist showing terminal device and part of transmission mechanism.

Besides this functional hand assist, the patient's equipment included a wheel chair with overhead rods and slings, a lapboard, a suspension feeder, and handsplints.

Treatment aims and procedures. The aim was to determine if this hand assist was practical for this patient in view of her extreme involvement and to see if any modifications of the device were needed so that optimal function could be obtained. In addition, it was necessary to teach the patient to do activities of daily living with minimal assistance and to build up tolerance to the wearing of this device. Before this patient started any training in the use of this apparatus, the construction, function, and possibilities of the device were thoroughly explained and demonstrated to her. The training procedure, at first, concentrated on teaching her to open and close the device, which she did by external and internal rotation of her right thigh. At this stage it was advisable to place her in front of a large mirror in order that she could see exactly what was happening. Several days were spent in having her grip and release small objects such as dominoes and blocks of various shapes and sizes. When she was able to do this automatically, she progressed to playing a game of dominoes or checkers. This activity gave her an opportunity to use the functional hand assist while concentrating on the play of the game.

After successful accomplishment of this simple procedure, a more difficult activity requiring a wider range of motion was prescribed. This activity was learning to feed herself which was of great importance to this patient. It was found that she could easily accomplish this if her forearm was placed in slight pronation. Her eating equipment included a swivel spork[2] with a built up handle, a rotation plate with a siderail, and a glass holder. Her food had to be cut up for her, but once this was done she was independent in feeding herself. This also included eating bread, cookies and fried chicken with her fingers.

The next prescribed activity was writing since it required more co-ordinated motions. The patient had already been learning to write with a pencil holder attached to a "T" bar on her handsplint. She used a ball point pen rather than a pencil, since it required less pressure to show up on paper. With this hand assist she learned to pick up and lay down the pen or to replace it in its holder. Since she could hold the pen in a normal position, she found that it was easier to write, and thus her writing improved. With practice her speed also improved steadily, and at the



Medial side of functional hand assist showing terminal device and supporting cuff.

time of discharge (July, 1954) she could write all of her own letters. This she had not been able to do since she contracted poliomyelitis.

All of the above activities required small prehension. When she became quite efficient in them, she progressed to picking up larger objects. She tried holding a cup with a built up handle. She was able to lift a cup, approximately half full, high enough to drink from a straw. She did not have enough strength in her arm to lift a full cup.

At this point it was felt that the long forearm cuff on the device was unnecessary, and it was shortened. This made it easier for her to raise her hand in the suspension feeder and also improved the appearance of the device. In addition, a supination assist was added, since she had a tendency to pronate her forearm when lowering her hand to the lapboard. A slightly supinated position was found to be more practical for most activities.

After the achievement of these basic functions, the patient progressed to other activities of daily living and recreational activities. She was able to do the following:

1. *Putting on glasses.* At first this activity seemed almost impossible, but after three weeks of practice, she had learned to take them out of the case (could not unsnap case), put them on, take off, and replace in case in approximately one minute.

2. *Washing and drying face.* She could do this quite successfully with a towel and washcloth. However to prevent getting the device wet, it was advisable to use a sponge with a small handle attached.

2. A combination spoon and fork.

3. *Brushing teeth and applying cosmetics.* Both of these activities were possible. To provide a swivel for the toothbrush a small plastic tube was placed over the handle of the toothbrush, thus enabling her to turn the brush with her teeth in order to reach both sides of her mouth. Her only difficulty was exerting enough pressure to get her teeth clean. An electric toothbrush was tried and was successful; however the patient preferred not to use it.

4. *Brushing hair.* She was able to pick up and hold a hairbrush, but due to limitations of arm, neck, and trunk motions, she was unable to reach the back and right side of her hair. A long handle on the brush was not practical since it added weight and made it difficult to maneuver.

5. *Playing cards.* By assisting with a page turner in her mouth and with the use of a card holder, playing cards was possible although fairly difficult for this patient.

6. *Other activities.* Tip-weaving, rug hooking, painting, and stenciling were accomplished without any difficulty. Rug hooking proved to be her favorite craft, and she became quite good at it. She used an automatic rug hook, with the burlap on a small raised frame. Other crafts, such as leather lacing, wood-working, and plastics were also done with some assistance.

CONCLUSION AND SUMMARY

A functional hand assist was developed which permits a patient with a severely involved hand to perform activities of daily living such as eating, writing, typing, brushing teeth, putting on cosmetics, washing face, etc., and to take part in recreational activities such as playing cards, dominoes, checkers, board games, drawing, painting, reading (turning pages of book), rug hooking, tip weaving, leather lacing, etc.

If a device is used without metal covering for finger and thumb pads, tolerance for wearing has to be developed slowly and steadily. In the case illustrated, the patient wore this device for short periods of time at first. It was on ten minutes out of an hour, and gradually this time was increased. Another consideration was the pressure exerted by the spring or elastic. This has to be adjusted to the threshold of pain-pressure sensations and the state of peripheral circulation. At first this patient could stand only four ounces of pressure, but by gradually building up her limit of tolerance she was able to hold about three pounds at the time of discharge.

Above all, a good attitude by the patient is necessary, for only if the patient is interested and willing to complete the training for this assist will he or she profit from it. This particular patient was very interested and extremely co-operative.

It is obvious that this apparatus is not the final answer to the problem of functional rehabilitation of patients with flail hands, and at the present time experimental work is being continued at Gonzales Warm Springs Foundation on certain modifications which should provide better activities. However this report is presented with the hope that it will stimulate greater scientific investigation in this field so that eventually some device will be designed which will prove functional as well as have desired cosmetical appearance.

The authors wish to thank the staff at Gonzales Warm Springs Foundation for their co-operation, especially Mr. R. N. Witt, supervisor of the brace shop, Miss R. Elliott, director of the occupational therapy department, and Mrs. B. S. Riess, director of the physical therapy department, for their valuable assistance. Photographs were taken by Mr. Rothwell, staff photographer of Gonzales Warm Springs Foundation.

Calendar of Events

June 20-24, 1955
Annual Conference of the
American Physical Therapy Association
Hotel Jefferson
St. Louis, Missouri

October 10-12, 1955
Annual Meeting of the
American Academy for Cerebral Palsy
Claridge Hotel
Memphis, Tennessee

October 22-28, 1955
Annual Conference of the
American Occupational Therapy Association
Sheraton-Palace Hotel
San Francisco, California

March 25-31, 1957
Inter-American Congress of the
Pan American Medical Association
Mexico City, Mexico

In Memoriam

Miss Virginia Jarden Blake
Ardmore, Pa.
Deceased August, 1954

Miss Gladys J. Meyer
Queens Village, L.I., N.Y.
Deceased May, 1954

Lcdr. Ann Davidson, (NC) USN Ret.
Falls Church, Va.
Deceased 1954

REFINING THE USE OF OT WITH THE LOBOTOMIZED PATIENT

HAROLD SHALIK, O.T.R.

INTRODUCTION

Whether the lobotomized patient is to be treated within a special lobotomy group, or within a group of regular psychiatric patients, it is necessary that the occupational therapist have an understanding of the rationale for the operation, the kinds of behavior to anticipate, and the types of activities and approaches to practice. While the lobotomized patient may after the operation still exhibit phases of his pre-operative psychotic behavior, certain changes occur which must be treated accordingly. This paper shall attempt to present the pertinent factors as they relate to the prefrontal lobotomy and their significance to the practice of occupational therapy.

Commencement of occupational therapy. As recently as five years ago the surgical procedure in severing the pathways to the frontal lobes was such that the resultant behavior of the patient was child-like the first week. The use of improved surgical techniques have now eliminated this early child-like phase and the therapist may begin a graded occupational therapy program the first post-operative day. During the first seven to ten days a ward occupational therapy program is practiced, with the therapist coordinating his approach with the nurse and attendant. Activities for the regressed or confused patient should as a rule be simple in nature (e.g., crayoning a picture color book, loopers, link belts, etc.), and the activities for patients in good contact with reality should be chosen on the basis of what was successfully performed prior to the lobotomy. The objectives of occupational therapy with the patient at this early stage are the establishment (or re-establishment) of rapport, the development of a healthy attitude toward activity, and resocialization.

EARLY PROBLEMS

Incontinence. "Urinary incontinence is very common in the days following operation, but rarely lasts longer than two weeks. The same may be said for rectal incontinence."[1] Urinary incontinence or wetting may persist in 12 to 25% of the patients beyond the initial two week period.[2] The two factors which apparently account for the urinary incontinence are a spastic bladder as a result of surgical liberation of the autonomic system from supranuclear inhibitory centers,[3] and mental changes resulting from the lobotomy.[4] In either case the occupational therapist, in conjunction with the nursing service, must utilize a planned regime of toilet training.[5, 6] A schedule which permits trips to the toilet at regular intervals (one-half to one hour) is the recommended procedure for these patients. In the early phase of the post-operative period this schedule should receive precedence in occupational therapy and the activities should be planned around it. The training intervals may be lengthened as wetting ceases.

Disorientation and lethargy. The relationship of the plane of the incisions to the coronal suture usually determines the degree of lethargy that will be present. Incisions made anterior to the plane of the coronal suture may not result in any lethargy or inertia, those which are made along this plane always show a certain amount of inertia (standard operation), and those incisions made posterior to the plane of the coronal suture may result in a profound inertia (radical operation).[7] Disorientation is determined by the relationship of the incisions to the plane formed by the border of the Regio orbitomedialis and Regio frontalis (after von Economo and Koskinas) in the lower quadrants of the frontal lobes. "Incisions anterior to this plane cause no disorientation, while incisions posterior to this plane cause disorientation with regard to the self in varying degrees from the highest spiritual on down to the most elementary visceral types of self-consciousness."[8] Whether the therapist is dealing with the transient types of disorientation and lethargy or the more permanent types his therapeutic approach only varies as to degree. The three factors most emphasized with these patients are the rate of speed at which they work, the level of the activity to which they are assigned, and the continual prompting and reinforcement of directions by the therapist. Each patient must be carefully observed and then an individual approach used. After the assignment of simple activities, grading may take the form of assigning to the patient activities which he had success performing prior to his lobotomy.

Socialization. An advantage to the lobotomy operation is it permits individuals who were asocial and unapproachable prior to the operation to develop more socially acceptable modes of behavior afterwards. These socially acceptable patterns are not automatically developed and require many weeks and months of training by the therapist and the other members of the hospital staff. In a percentage of cases certain undesirable behavior results from the operation. Most prominent of these are (a) a tendency to increased food intake, (b) irritability, (c) outspokenness, and (d) lack of initiative.[9] When these limitations to the pa-

tient's behavior are understood it is possible to proceed on a progressive resocialization program.

In the clinical situation one of the first prerequisites is a quiet, orderly clinic. It is absolutely essential that the patient have a feeling of order if he is to exhibit any type of social behavior.

For those patients who either refuse to associate with other patients in the clinic, or associate in an undesirable manner, the therapist may in many instances be the means by which proper social attitudes are developed. With the former type the therapist must establish a positive rapport, and when this is accomplished the therapist should transfer this relationship to another patient in the clinic towards whom the patient has no ill feelings. It is preferable that the individual with whom the patient initially associates be as complementary in personality make-up and interests as possible. An effective means for developing a relationship between two patients is to have them engage in a common activity. Warping a loom would be such an activity. In the latter group, where undesirable contacts exist, it is the role of the therapist, either in a subtle or overt manner, to stop the existing incorrect behavior, at the same time providing a desirable alternative. Sometimes poor patient relationships are a result of conflicting personalities. Then group dynamics, where the judicious seating together in the clinic of like individuals and the separation of unlike individuals, is practiced. In the case of bad verbal patterns, where patients talk across the clinic in an offensive manner, the therapist should subtly engage one of the two offending members into conversation and this should as a rule stop the undesirable conversation. If this is unsuccessful the therapist should then outwardly admonish the offending individual for his conduct.

Masturbation. Masturbation or fumbling with the genitals, in either an overt or covert manner, represents another socially unacceptable type of behavior which the therapist may occasionally encounter with the regressed schizophrenic.[10] Overt masturbation or fumbling is the easier to stop, as a verbal admonishment will usually cease the action. Covert masturbation or fumbling is the more difficult to stop for it is difficult to discover. However, when the therapist is familiar with his patients he can learn which patients are guilty of this socially unacceptable behavior and be alert to any attempts at it. Prevention of its occurrence, and admonishment when it occurs are the recommended approaches to use. An explanation that it is wrong to masturbate or fumble with the genitals in public should accompany the admonishment. Persistent masturbation may often be brought under control in the male patient by the use of the drug "stilbestrol."[11]

GENERAL PRINCIPLES

Activity. Ceramics will be found to be a desirable initial activity for use with the lobotomized patient in the clinic. The advantages of ceramics as an initial activity are:

1. It is easily performed and taught.

2. It can be accomplished in one period when a simple project is chosen, thus giving the patient a feeling of accomplishment.

3. The patient need not conform to technique if he does not wish to. Ceramics can be a non-directive as well as a directive technique. With resistant patients it thus permits grading of the activity from the non-directive to the directive, and for those who initially cooperate it can be graded to more complex levels of achievement. Also, confused individuals can perform the activity without conforming to specific directions.

4. Wedging of clay is valuable for those patients who wish a physical, noisy activity to release their hostilities.

5. Rolling out coils and smoothing can be a very sedative type activity for tense individuals.

6. There is some clinical evidence (with regressed patients) that where there is psychological basis for incontinence, wetting and soiling are reduced when the patient is engaged in the ceramic activity.

After ceramics is used to its maximum therapeutic advantage, the recommended follow-up activity is leatherwork due to the wide variety of projects possible and the grading which it permits.

In choosing activities, as the patient progresses, the same factors which are taken into account for all other types of psychiatric patients apply to the lobotomized patient, with some reservations. "Creative capacity in artistic, literary, musical, theatrical and other fields undergoes a decided reduction after prefrontal lobotomy."[12] Activities such as painting are as a rule poorly performed even when there is appreciable direction, such as in the "number picture" kits. It is, therefore, desirable to avoid activities which require a goodly amount of creative ability for their successful completion. The lobotomized patient performs better on activities that have a one, two, three relationship (i.e., highly concrete or directive) than ones that depend on abstract thinking for accomplishment.[13]

Completion of a project, while it is desirable, should not always be the objective with the lobotomized patient. Since there are changes constantly taking place in the brain following the lobotomy,[14] patients may insidiously or suddenly take a turn for the better or worse and a corresponding change in activity may be warranted when this occurs. It is very important that the therapist be alert as to when these changes are taking place. He should not assume once a pa-

tient is assigned to a project that he will remain on it until it is completed. A change in project may many times be as beneficial to the patient as the completion of the project.

Certain patients, particularly the lethargic type[15] and regressed catatonic schizophrenics, respond best to the *change technique* when attempting to stimulate their interest. This involves offering the patient a new, simply performed, quickly accomplished project each day. When projects are offered which either take too long to accomplish or require too much concentration it will be found that even if the patient can initially be engaged in this type of activity, after the first or second period he will refuse to continue on the project. Therefore, the activity program of choice with this type patient is a different project each period until the patient can be progressed to higher level activities.

For patients who present a picture of limited intellectual ability, but cooperative behavior, a particularly useful criterion for engaging them in activity is to choose activities in which the individual had some degree of success prior to developing his psychosis. Since the lobotomy relieves the patient of some of the disabling results of his psychosis it thus permits him to function in areas which were previously unperformable. When there is a limited intellectual capacity as a result of regression it becomes necessary to depend on this criterion for a decent level of function. The limitation of this approach is discovering either from case history or personal interview what the patient was able to do prior to his psychosis. Records from junior and senior high school may be useful here.

Scheduling: From his first day in the occupational therapy clinic the patient should be made aware that he has certain responsibilities to the clinic and to his fellow patients. The setting of limits is important in the therapeutic approach to the lobotomized patient and it is through a schedule that the patient first begins to understand and recognize limits. While unforeseen phenomena may occasionally change a schedule, once a schedule is set up it should be adhered to as rigidly as possible. Conforming to a schedule makes a patient realize that there are certain times when he must work and certain times when he can play (or relax from the therapist's viewpoint). It is the role of the therapist to help the patient accept conformity through habit training.

Group dynamics: The propinquity of patients, as well as the physical arrangements of the occupational therapy clinic, is an important consideration in the therapeutic approach to lobotomized patients. Patients annoying each other is one of the problems to contend with in this regard. Some lobotomized patients spend much of their time bothering other patients thus preventing any constructive work by either the patient receiving or causing the annoyance. Physical separation and verbal admonishment every time the undesirable behavior occurs are the recommended procedures to use to correct this condition.

Other members of the group may, after the lobotomy, still be hallucinating or having ideas of reference toward certain patients in the clinic. The therapist should be aware that the lobotomy only corrects the way in which an individual responds to his hallucinations and delusions and may not entirely dissipate them.[16] Potential difficulties from these individuals can be avoided by proper placement in the clinic.

Hyperactive or confused individuals may disturb members of the group around them and their judicious placement should prevent unfortunate situations from occurring. Some lobotomized patients are very tolerant of those displaying undesirable behavior, and will help their fellow patient get through the excited or confused phase. This is a beneficial relationship for both parties. However, other patients may entirely resent the hyperactive or confused and the results will not be beneficial. It is the role of the therapist in each instance to use his judgment and evaluate the situation that exists.

Noise occasionally irritates certain patients in the clinic, and conversely stimulates others to constructive productivity. It is desirable, therefore, that noisy activities be limited and when used set off to one side away from the main body of the group.

In organizing an occupational therapy clinic for lobotomized patients one area of the clinic should be designated as the socialization area where a majority of the patients are located. Another area, with a separate table for each patient, should be designated as the isolation area. With this arrangement those individuals who have difficulty integrating into the group are seated off by themselves where they can receive the individual attention they require.

Each lobotomized patient should be assigned a seat in the occupational therapy clinic to which he is responsible. A simple technique to teach a patient where he belongs is to place his project at his assigned place before he comes into the clinic. This in addition to verbal reinforcement should teach each patient where he belongs, and contribute toward a more orderly clinic.

Advancing the patient. As the patient progresses in complexity of activity, or improves his quality, attitude and workmanship there may come a point where advancement to another assignment beyond the scope of occupational therapy is indicated. The patient should be selectively placed

(*Continued on page* 143)

PROPRIOCEPTIVE FACILITATION ELICITED THROUGH THE UPPER EXTREMITIES*

PART III: SPECIFIC APPLICATION TO OCCUPATIONAL THERAPY†

A. JEAN AYRES, M.A., O.T.R.

The literature on the use of proprioceptive facilitation in occupational therapy is even more meager than that relating it to therapy in general. This portion of the study consists of the writer's analyses of the methods and techniques in occupational therapy which involve the various proprioceptive facilitatory mechanisms. Only the upper extremities are considered. Some of the analyses, it will be noted, will be of methods or equipment found in the literature—not analyzed there in terms of proprioceptive facilitation. Where sources for equipment are not recognized, they are the suggestions of the writer.

Preliminary to the analyses, it is helpful to review the basic concepts presented previously. First, function seems to be the underlying keynote. The function of the nervous system seems, to a large extent, to be based on reflexes that were established in man's evolutionary development. These reflexes developed for a reason, according to Sherrington, who pointed out that every reflex must be purposive. Usually reflexes enable the organism to adapt to its environment.[50] Reflexes are functional and form the basis for nervous behavior. The brain acts on the basis of functionally significant motor patterns, not in terms of individual muscles. The proprioceptive mechanisms reviewed are fundamental in motor functioning. Some contactual stimulation is present in most actions of the upper extremities. Handling objects usually involves the use of action patterns. Successive induction frequently is observed in normal activities. Grasping is natural and functional, frequently involving both hands. Throughout, integrated function is the keynote. For this reason, the use of simple, normal, life-like activities is a logical treatment to encourage response in paresis in muscles. This, of course, is a principle of occupational therapy. Then occupational therapy should inherently, by the nature of its approach, be helpful in these cases.

The ways and means of utilizing proprioceptive facilitation will now be investigated according to the mechanisms covered previously. It will be noted that often it is not so much the kind of activity that is important as how it is done.

Contactual stimulation. It was found in Part I that proprioceptive sensation was stimulated by and was somewhat dependent upon the skin sensations in contactual stimulation.[50] Both are important in their cooperative role of bombarding the motor cortex continuously and thereby lowering the threshold to voluntary innervation.[15] Direct pressure to the muscle also plays a part in the effectiveness of contactual stimulation. Built up handles increase the area for contact and provide additional pressure. Contactual stimulation with emphasis on pressure can be given to other parts of the upper extremities by the use of weighted bags, such as over the dorsum of the forearm for contactual stimulation to facilitate extension of the wrist or fingers. The occupational therapist can also exert pressure manually to a muscle belly while the patient is voluntarily attempting an activity. For example, slight pressure over the anterior deltoid can facilitate volitional flexion of the humerus.

Many proprioceptive and skin sensations come naturally through the palm of the hand while grasping. Grasping of objects, then, is important as a facilitating mechanism and nearly every activity inherently involves grasping. When normal grasping is not possible, some provision can be made for artificial grasping, taking advantage of contactual stimulation. A mitten which holds the hand in a passive grasp through straps has been described by Shear.[49] Although originally designed to enable the patient to exercise with pulleys, bar bells, etc., it also enables artificial or passive grasp. The thumb was not included in this mitten. It would seem better that the thumb be included in the normal opposed position when a mitten is used for contactual stimulation.

Stretch. For stretch to be effective, a muscle need not be stretched beyond its normal length. A muscle can best be placed in the lengthened (stretched) position by activities which require a complete—or nearly so—range of motion. The muscle is put on stretch when the joint is at one end of its range; when the joint is returned to the other end of its range, its antagonist is on stretch.

For children, the placement of toys or parts of

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†This is the third part of a three-installment article. The first two installments appeared in the previous two issues.

playthings so that they must reach as far as possible in the desired direction accomplishes this end. Craig has photographed a child putting a star on a wooden Christmas tree which illustrates the possibilities of children's toys.[4] The star should be placed so that the muscle group to be facilitated would be put on stretch just before it was exercised. Other children's toys mentioned in the literature that lend themselves well to facilitation through stretch are use of a large form board into which fit different shaped pieces, similar to a large, simple jig-saw puzzle.[36] Large wooden beads with a long string for stringing[36] afford the opportunity to use placement of an object to get desired stretch as well as to use the complete range to accomplish the activity.

Rogers has suggested several activities for children in which complete range of motion is a natural component. Spools, beads, or blocks strung on a string running the length of a table would get complete range at the elbow, shoulder and shoulder girdle. Changing beads from one bowl to another (the bowls set far apart), and using a very large sheet of paper for large drawings accomplish the same end.[45]

Some of the standard occupational therapy activities can be modified easily to encourage use of the complete range of motion of the upper extremities. In weaving, a long shuttle requires complete forearm extension and shoulder horizontal abduction, thus facilitating forearm flexion and horizontal adduction. The beater can be arranged so that complete forearm flexion is necessary before extension is required to push the beater back.

In woodworking there are a few adaptations that encourage the use of complete range of arm motion, and consequently complete range of shoulder girdle motion. The use of a saw of adequate length to encourage full elbow and shoulder range and the position in which the sawing is done are both essential to produce facilitation through stretch. If a wood project is to be assembled from small pieces, full range while sanding may be achieved through the use of a table on the top of which a large piece of sandpaper has been tacked. Sandpaper of large enough dimensions can be obtained from broken milling belts. (Contact lumber yards.) With this arrangement, and by tilting the table in one direction or another, full range of motion at the elbow and shoulder can be achieved by pushing the wood over the sandpaper instead of the sandpaper over the wood. A work table presented by Esenther[8] has possibilities along this line. This work table has a divided top which can be raised at one end to give a slanting surface. Covered with sandpaper, this would be ideal for sanding an object to obtain good range at the shoulder and shoulder girdle.

It is quite difficult to find activities which normally use the complete range of motion at the wrist and pronation and supination of the forearm, for it seems that the wrist is usually held in stabilization for most actions. Hammering can be used if the patient remembers to use complete wrist action instead of the more normal combination of slight wrist action with more elbow action. Every time a situation is made less normal, it is harder to control. Rather than offer an activity which cannot be well controlled, it might be better to utilize a less life-like activity, such as weights and pulleys which can be well controlled.

Range of motion of finger and hand joints can be gained through the mixing of dry clay with water. While doing this, it seems most natural to the patient to open his hand to its fullest extent and then to close it tightly.

It was mentioned above that traction provides one means of utilizing stretch proprioceptively. Traction is applied to a joint naturally each time some resistance is applied distal to the joint. Thus, each time we lift something with our hands, traction (and proprioceptive facilitation) occurs in some of the joints depending upon positioning. This can be kept in mind for all activities. Similarly, compression, which facilitates extension, occurs each time we push on something like a saw, sanding block, or file.

Resistance. The use of this facilitation mechanism in occupational therapy is not difficult. Although working with most materials involves some resistance, the aim is enough resistance for maximal facilitation, not just a little facilitation. Generally speaking, the heavier the resistance (up to maximal resistance) the greater the facilitation. In some activities, the materials used, such as woodworking or clay preparation, offer adequate resistance even for the moderately strong. Other activities, such as weaving or the use of toys and children's games will not offer much resistance. It is important, therefore, to know how to increase the resistance to muscle action while the patient is engaged in various activities.

There are a few methods of adding extra resistance which are applicable to many activities. One can give resistance to the upper extremity muscles working against gravity by using a small sand bag tied distal to the joint on which the muscle acts. For example, a small sand bag (lead shot is more compact) placed on the dorsum of the hand will give extra resistance to the wrist extensors when the forearm is pronated. At the same time it is giving resistance to all muscles proximal to it which are working against gravity (elbow flexors, shoulder flexors and shoulder girdle upward rotators and abductors). The weight bags also play a role as contactual stimulators.

A cuff from which a cord runs through a pulley

with a weight attached to its other end provides practical means for adding resistance. Through different placement of the attachment of the cuff to the patient, or by changing the location of the pulley, or by varying the amount of weight used, a given, controlled resistance to muscles acting on the wrist, elbow and shoulder joints can be given. A practical pulley is one that is welded to a "C" clamp that can be attached quickly at many different places. The pressure created by the cuff is important. Fortunately it is usually felt on the side of the extremity toward which motion is desired, and is consequently additionally facilitating. The use of this pulley-"C" clamp can be applied to many different activities, such as woodworking, weaving, and playing with toys.

Some added resistance techniques for specific activities have been found to include dental dams attached to cuffs below and above the joint or between the wrist cock-up and chair back (going under the axilla) for resistance to writing,[47] springs added to a loom,[3] sanding blocks weighted[3] and placement to increase gravity.[8]

Applying resistance to muscles acting on the hand is not always as easy as applying it to the more proximal upper extremity muscles. Any strong gripping, such as of a saw handle, offers resistance as well as contactual stimulation which will facilitate other muscles. Since the resistance is in only one part of the range during gripping, this is not the best method for building power in a muscle. There should be resistance throughout the range. Boeshart[2] has described a game of "squeeze hockey" in which a rubber ball syringe is squeezed to provide forced air to move a ping-pong ball. Alternate contraction and relaxation are necessary. There is further facilitation through the large contactual area.

Providing resistance to the finger extensors is more difficult than to the flexors because finger extension against resistance is seldom seen in normal, life-like activities. An effective means has been developed by Kabat and Rosenberg.[27] It is a glove to which are attached bands of dental dam to provide resistance as the finger is moved. Pressure on the side of the finger toward which movement is desired is provided by the band's pull on the glove. By placement of the dental dams, any of the muscles acting on the fingers can be exercised.

Patterns of muscle action. Activities and patterns of muscle action seem to be almost inseparable. Facilitation through patterns seems to be at its best when using simple, primitive patterns.[35, 34, 31, 17] It has also been recommended that they be diagonal and rotatory.[25] In planning occupational therapy, therefore, the simple, gross, mass, diagonal patterns, which are naturally the primitive ones, are recommended.

Woodworking is one of the best activities for achieving facilitation through mass patterns. Most of a carpenter's actions—sawing, planing, filing, sanding, or driving a nail—are simple ones done diagonally across the body. They are easily performed, are easily repeated, and do not require much cerebration. These are qualities necessary in utilizing mass patterns for proprioceptive facilitation. Although planing is sometimes difficult for a patient to perform, sawing is usually possible and filing or sanding can be adapted to almost every patient. Positioning determines the diagonal or rotatory component of the pattern. The sanding table and the work table with divided top which can be raised at one end as described above are both well adapted to mass diagonal patterns of the upper extremities.

The use of weaving as a mass diagonal pattern has been suggested by Rood. She recommends resistance from the breast beam to the beater so that the beater will be held back with the hand in position to bring the arm across the body when beating. Throwing the shuttle as well as pulling the shuttle out from the shed with a long weft thread also create diagonal patterns.[47] Additional suggestions by Rood for diagonal patterns are the use of a punching bag and wedging of clay across the body to the opposite side of the table.[47]

Toys and games offer considerable opportunity for mass diagonal patterns. Shuffleboard and darts have been suggested for their natural mass pattern component.[21] Hammering games, push toys, and throwing toys (bean bags or balls) are all easily handled mass pattern activities. Some of the toys suggested by Rogers can be utilized in this way. Her suggestions which are particularly adaptable include ring toss, rattles, toy brushes to use with a dust pan, throwing a ball on an elastic so that it returns, and rolling a ball across the floor.[45]

Successive induction or reversal of antagonists. This principle, it will be recalled, involves the antagonistic motion immediately preceding the main action. Some of the examples given to indicate how facilitatory mechanisms are normally used were chopping wood, pitching a baseball, and swinging a golf club. Similarly, in occupational therapy the sports offer an excellent medium for this mechanism. Again, use of the punching bag and throwing games utilize the reversal of antagonists quite naturally. Here the resistance to the antagonistic motion, which is important for maximal facilitation for the agonist, comes from the inertia of the part in quick antagonistic action.

Woodworking involves a very natural reversal of antagonists. It is natural because resistance is encountered in the materials in both directions, as in sawing or sanding. This resistance in both directions from friction of materials is something

not easily obtainable with weights and pulleys. Hammering also offers successive induction, the resistance coming from either the weight of the hammer or the acceleration of the hammer.

Although weaving is a repetitive activity, it is difficult to utilize facilitation through the reversal of antagonists because the weaver must stop frequently to take care of the weaving process and consequently is unable to concentrate on the actions involved.

An activity entitled "paddle hockey" described by Boeshart for pronation and supination[2] could utilize a reversal of antagonists quite easily. The paddle is made to hit the ball through a pronating or supinating action. The reverse action, of course, must take place before the main action; that is, if it is desired that pronation be facilitated, the patient would hold the paddle in his hand in such a way that he would get the paddle into position through supination and immediately follow through with pronation to hit the ball.

Facilitation through the cerebellum. This facilitating mechanism which has been called rhythmic stabilization by Kabat[25] is one of rapid alteration of isometric contraction (contraction without movement) of antagonists against maximal resistance. This is difficult to incorporate into most occupational therapy activities. One place where it can be used effectively is at the wrist joint. The wrist is frequently used in stabilization while actions are accomplished with arm motion. When doing one of these actions that gives resistance in opposing directions, rhythmic stabilization of the wrist will result. Some of these activities are sawing—particularly with a coping saw, filing—if the file is rubbed in contact with the material both going and coming—and sanding. The most effective facilitation is given if the hand is held in mid-position so that the full resistance is felt at the wrist.

This technique can also be administered to the finger joints by having the patient thrust his finger into a box of sand and move his hand about with arm motion, trying to keep the finger perfectly steady. The sand provides the resistance, and the change in direction of arm motion the reversal of resistance. This is a technique which might possibly be worked out for joints proximal to the wrist.

Another effective application of cerebellar stimulation through occupational therapy approach is the use of sawing, or filing (particularly with bilateral tools) to facilitate the muscles maintaining trunk balance. The trunk muscles must maintain isometric contraction alternately against the resistance provided through the upper extremity activity.

Bilateral facilitation. Many activities can be made bilateral by having the patient use both hands. Some examples of this are: large hollow blocks that require that a child use both hands to lift,[36] building a cone tower with both hands,[36] piling large square bean bags,[45] rolling a ball with both hands,[45] handling a wheelbarrow, tricycle, or doll carriage,[45] and beating on a drum or other instrument with both hands.[45] A patient can be instructed to punch a punching bag with both hands, pull the beater on a loom with both hands, or lift and wedge clay with both hands.

Other activities can be made bilateral by adapting equipment. Some examples of this are: a shuffleboard paddle and ping-pong paddles rebuilt for bilateral use.[2] The California Rehabilitation Center (formerly the Kabat-Kaiser Institute) at Santa Monica, California, has developed some bilateral saw handles which enable the patient to saw only when using both hands. Similarly, a simple handle which can be attached to a file to make it bilateral can either be built or purchased. Sanding blocks which are bilateral are numerous and have no end of possibilities.

A point to be remembered in giving bilateral activities is that maximal resistance to the more normal extremity (which is facilitating the less normal) will not only bring about maximal proprioceptive facilitation but is necessary to prevent the more normal extremity from mechanically doing the work of the weaker one.

Extensor thrust. The extensor thrust is elicited by pressure on the palm of the hand and stretch of the adductors of the fingers. (This is easily understandable if the postural purpose of the reflex in quadrupeds is borne in mind.) Therefore, activities which apply pressure to the palm of the hand during extension of the forearm help elicit the reflex even though it appears to the casual observer that grasp is involved. The handles of saws and sanding blocks exert pressure which assists extension through this neurophysiological mechanism.

Rood has suggested forceful dart, bean bag, or ball throwing and planing with the thumb hooked on the front grip as activities utilizing the extensor thrust.[47] It can be incorporated along with the resistance glove when extension of the fingers is to be stressed. Sherrington found that a flexion (withdrawal) reflex in one limb created a crossed extension reflex in the contralateral limb[50] that is apparently neurologically very much the same as the extensor thrust. Although the literature provides nothing in therapy using this crossed extension reflex in the upper extremities, it seems that some of the bilaterally reciprocal activities might be proprioceptively facilitating because of this mechanism.

A device which falls into this category, described by Gable,[11] is a double wheeled sander for upper extremities utilizing the principle of the pedal machine. There is a handle for each hand so that operation may be either simultaneous or reciprocal. If reciprocal, one arm is flexing while

the other is extending, just as in the crossed extension reflex. Pressure to the palm is given by the handle when extension of the arm is required. The activity also provides a gross motion against resistance.

Grasp reflex and instinctive grasp response. The present literature offers nothing by way of utilization of the proprioceptively induced mechanism as a treatment media. As can be said of each of the means of facilitation presented above, much more exploration needs to be done before the therapeutic possibilities are really understood. It seems probable that grasp in itself plays more of a facilitating role than therapists are aware. The instinctive grasp response has been used manually by the writer to gain desired arm motion.

Application of general principles. There are a few general principles of proprioceptive facilitation that should be kept in mind. One is that the frequency of discharge of nerve impulses is important in muscle response and that frequency of discharge increases with the increase of stimulus.[15] When applied to occupational therapy, the stimulus (such as contactual stimulation or resistance) should be intense, such as strong contact over a large area or heavy resistance. However, when Gellhorn stimulated the motor cortex of monkeys with increasing intensity or frequency, the recorded electromyographs led him to conclude that for intensity of excitation, summation is more important than is the maximal frequency of discharge.[15] Interpreted in terms of occupational therapy, it is better to obtain facilitation by using several different mechanisms than to rely on the strength of one form of stimulus. This can be done easily because these mechanisms are, for the most part, natural components of simple, normal activity. Sanding provides a good example for the use of many proprioceptive facilitating mechanisms at the same time to utilize the greatest amount of summation.

A sample activity might be sanding planned for a patient with generalized weakness (of central origin) in the upper extremities. First it is desirable to get as much proprioceptive facilitation through contactual stimulation as possible. This can be done by providing a sanding block with two handles easily grasped and which fill the palm completely, providing maximal surface contact. The two handles encourage bilateral reinforcement. If either hand cannot grasp firmly, it can be attached by a mitten fastened tightly enough for the patient to feel secure with comfortable pressure on the hand. At the same time, adaptation of this contactual stimulation must be considered. If the hand is left in pressure contact with the handle of the sanding block for a long period of time, the facilitating effect of the contact will "wear out." It might be preferable to shift to a new activity in this case.

As the patient sands, pressure is made on the palm of his hand, thus encouraging forearm extension through the extensor reflex when the motion is away from the body. At the same time pressure on the joints causes compression which facilitates extension. When the motion is toward the body, traction on the joints facilitates flexion.

Muscles act in patterns of action and they are most apt to be proprioceptively facilitated if those actions are simple, gross, diagonal patterns. Accordingly this patient may sand a long board placed diagonally in front of him, first making an angle in one direction, then an angle in the opposite direction to get different patterns of motion. Part of the time the board could be on a horizontal plane, part of the time one end could be elevated and part of the time the other end, so as to exercise all of the muscles of the upper extremities throughout the complete range. In other words, the position of the board would be changed frequently but always placed so that the action pattern required to sand it is a normal mass pattern.

Additional proprioceptive facilitation is obtained by advising the patient to use complete range of motion, thus putting some muscle groups on stretch at the end of each motion. The patient would receive maximal resistance and the resistance would be encountered in both antagonistic and agonistic parts of each pattern of action. Attaching a rope to the sanding block to utilize a pulley-"C" clamp would enable extra resistance in one direction but would eliminate all resistance and even give assistance in the opposite direction. Weighting the sanding block instead will give equal resistance in both directions and will also sand the board more quickly. If there is muscle imbalance and the patient can take more resistance in one direction than in another, the rope and pulley outfit can be used or combined with the weighted block. The reason for resistance in alternating directions is to utilize successive induction of the muscles which gives additional proprioceptive facilitation.

Eight different methods of proprioceptive facilitation have been utilized at the same time to derive increased response to volitional movement in weak muscles. Yet the activity remained a completely normal one. This is not a coincidence; many proprioceptive facilitation mechanisms were present because the activity was a simple, basic one—simple and basic because so many facilitating mechanisms were inherent in it.

It seems, then, that the fundamental organization of the neuromuscular system is based on function. When something disturbs that fundamental organization, it is reasonable to presume that treatment might well be based on function—on activities simulating simple, normal, life-like processes

utilizing neurophysiological mechanisms recognized for the integrative role they play. This approach is found inherently in the techniques of occupational therapy. However, even though this sounds very logical, it has not been found to be entirely practical. This suggests that the treatment of neuromuscular disorders is in the early developmental stages. The material presented in this study can only point in the direction toward which understanding of the neuromuscular system is being revealed. Treatment procedures will have to adjust accordingly as progress is made.

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PRINTING PRESS ADAPTATIONS*

CORDELIA MYERS, CAPT., WMSC

Adaptations on the hand press and floor printing press which aid in the rehabilitation of patients with residual muscle weakness and joint limitation have been developed at Murphy Army Hospital, Waltham, Mass. Exercises for muscle strengthening and joint mobilization have been considered in the designing of these adaptations. Printing with these adaptations employ the following treatment principles:

(1) Dr. Thomas DeLorme's theory of progressive resistance exercise.

(2) Alternate muscle contraction and relaxation during exercise.

(3) Localization of motion to specific joint or joints and strengthening of specific muscle groups.

(4) The motion required to operate the equipment accommodates variable degrees of joint motion.

(5) The activity provides sufficient repetition of motion to insure therapeutic treatment.

THE HAND PRESS

The hand press has three adaptations to obtain increased treatment value: (1) Resistance to the hand lever. (2) Elevation of the hand press. (3) The addition of a second handle to provide bilateral exercise.

Description of adaptations. (1) The primary adaptation to this press is the progressive resistance. A wall pulley exercisor, commonly used in physical therapy is attached to the cabinet or table on which the press rests. The press and cabinet should be centered in front of an upright wall beam. The wall pulley exercisor, which includes the interlocking weights, sliding rods and stationary pulley, is centered behind the press and anchored to the printing cabinet or table; the top stationary pulley is made secure to the wall. One-eighth inch airplane cable is attached to the top interlocking weight, run through the stationary pulley at the top of the wall pulley exercisor and continued an additional six inches and soldered to form a one-inch loop. An additional piece of airplane cable runs from one handle, through the one-inch loop, and is fastened to the remaining handle. This provides a line of pull from both handles to the interlocking weights. The bilateral resistance to the press handles may vary from two to twenty pounds, depending upon the number of interlocked weights on the wall pulley exercisor.

(2) To increase the versatility of treatment, the hand press is elevated to a height beneficial for treatment of shoulder flexion and shoulder strengthening. The cabinet on which the press rests is raised eight to ten inches by means of a wooden platform. The photograph of the hand lever press illustrates this platform (see figure 1).

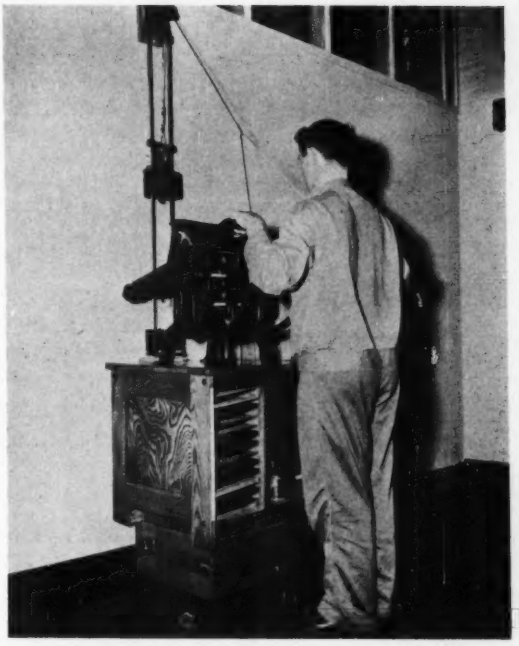

Figure 1. Hand press illustrating (1) added resistance to the hand levers, (2) bilateral hand levers and (3) elevation of cabinet press.

(3) As many occupational therapy clinics have found advantageous, a second hand lever handle has been added to the press to provide a bilateral activity for upper back and shoulder girdle strengthening. In addition, this reduces preparation time in the exchange of one handle from side to side to facilitate individual treatment. The standard press is equipped to accommodate two handles.

Conclusions

(1) In the hand press progressive resistance is applied to the handles by a series of interlocking weights. The resistance may be varied from two to twenty pounds in order to increase the work load as the patient gains muscle power.

(2) Muscle contraction and relaxation are attained by the alternate motions of pulling the lever, removing the printed sheet, and replacing an unprinted sheet.

(3) Motion is localized in the upper extremity to the shoulder girdle, and arm by instructing the

*From the Physical Medicine Service, Murphy Army Hospital, Waltham 54, Mass.

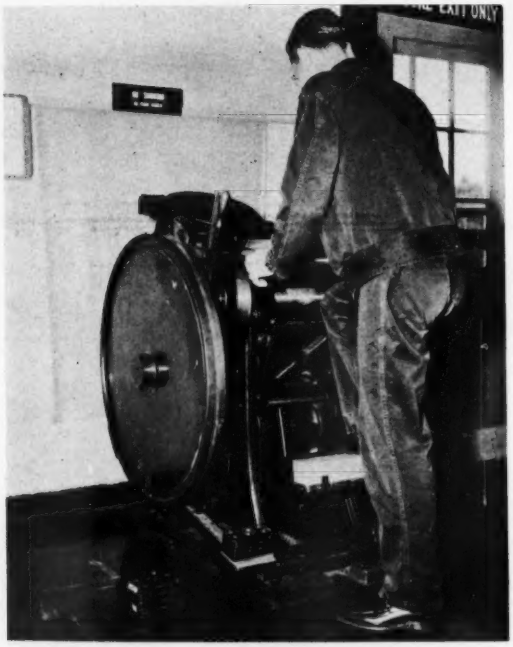

Figure 2. Floor press illustrating (1) added resistance to the foot treadles and (2) elevation on foot treadle.

patient to stabilize his trunk against the wooden paper holder.

(4) This activity will accommodate either limited or normal joint motion of the upper extremity depending upon the position of the patient, either sitting or standing.

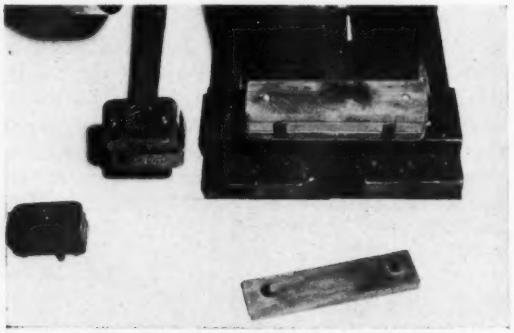

Figure 3. Floor press showing (1) elevation of foot treadle by means of wooden steps to increase knee flexion during operation and (2) weights applied to foot brake to give graded resistance during operation.

(5) The amount of material printed will determine the number of repetitions. For progressive resisting exercise, Drs. Thomas DeLorme and Arthur L. Watkins[1] prescribe:

"First set of repetitions, use ½ of 10-repetition maximum; second set of 10 repetitions, use ¾ of 10-repetition maximum; third set of 10 repetitions, use 10-repetition maximum."

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THE FLOOR TREADLE PRESS

In the rehabilitation of patients with weakened quadriceps and/or limitation of knee action, the standard floor press is adapted to treat these disabilities either separately or combined. Printing on the floor press offers more muscle strengthening exercise because of its heavy resistance than any other activity in this clinic, and is prescribed to hasten the final stages of rehabilitation of the disabled lower extremity. In addition to being an excellent therapeutic activity, printing is an activity which motivates soldiers to exercise. The finished product, though rarely emphasized by an occupational therapist, is both usable and appropriate to an individual's needs.

The two adaptations devised for the floor press are: (1) progressive resistance to the fly wheel, (2) a series of wooden elevations to the foot treadle to increase knee flexion. These adaptations follow the principles described at the beginning of the article and have increased the therapeutic exercise value of the floor press.

Description of adaptations. A wooden base 4 by 5 inches is attached by means of four bolts into the pedal of the foot brake. The base weight, taken from a series of interlocking wall pulley weights, is permanently fastened by means of screws into the wooden base. These weights apply resistance to the fly wheel and in turn offer resistance to the foot treadle. Additional weights are interlocked into the base weights for increased resistance as the patient progresses in muscle power (see figures 2 and 3).

The second adaptation was devised to increase the amount of knee and hip flexion required during the operation of the floor press. A series of one inch wooden elevations, the same size as the treadle, or approximately 12 by 3 inches, fit onto the treadle. The first one inch elevation is fitted onto the treadle by four straight metal strips which clip over the treadle, two in front and two in the back. These metal strips project over the width of the treadle and prevent slipping. The remaining three or four elevations may be secured into place in a similar manner or by one-half inch dowels which project into holes in the preceding elevation. These elevations give additional knee and hip flexion by the increased height of the foot treadle during operation. As the range of motion of the knee increases, additional steps or elevations are added. The steps are easily clamped on or off; the thickness of the boards or number of steps determines the graded amount of increased flexion.

(*Continued on page* 139)

NATIONALLY SPEAKING

From the President

In our program to strengthen clinical occupational therapy we have recently shored up our educational structure. Among other decisions at the mid-winter Board meeting in Atlanta early in April two educationally significant changes were made. These changes are not revolutionary but open the way for further development. Our profession is as strong as the alertness of our educational pattern in keeping abreast of our clinical needs.

The first forward step is a change in committee structure. The former education committee, with its trailing sub-committees, had grown through the years to a cumbersome number of nearly ninety members with overlapping personnel. This was parliamentarily unwieldy and resulted in a lack of a definite program in spite of the efforts of its faithful chairman and sub-chairmen. The recommendation of the group for reorganization was passed by the Board.

We now have a council on education to serve as a policy-forming judicial body on educational matters. The former subcommittees are now of standing committee status and serve as advisory committees to the council. As before, they represent schools and curricula, student affiliation centers, and graduate study. Each will continue to carry out significant studies, compile manuals, and serve as a forum for their respective members to discuss current problems. This last service we hope can be better organized and thus be of greater value to the individual. Small study groups can be appointed for special projects and are, of course, free to call upon outside consultants for specific information and advice.

The O.T.R. directors of each school of occupational therapy will automatically hold membership on the committee on schools and curriculum; the size of the membership will be determined by the current number of accredited schools, as long as this is practical. The committee on student affiliation will always be equal in number to the former committee, and will select its own membership from among the directors of student affiliation centers on some process of rotation. Those who do not hold committee membership are always welcome to attend meetings but hold no vote at the time. The committee on graduate study will remain essentially the same.

The chairman of the council will be appointed by the president, and in turn will appoint a chairman for each of the three advisory committees and they will appoint a vice-chairman and secretary for their respective groups. All shall hold membership in the council. In addition, the committees on schools and curriculum and student affiliation will each elect two additional delegates to the council. In ex-officio capacity the president, executive director and educational secretary will also be members of the council on education, making a total membership of seventeen.

This plan should be as broadly representative as the former education committee and have essentially the same function. The responsibilities will be more definitely spelled out in a standard operating procedure which is currently being prepared. The new structure should keep all the advantages of the former pattern and should, in addition, facilitate the functioning of each group. If the repetitive discussion of details and wording can be delegated to small working groups and their conclusions mailed out to committee members prior to meetings, the meeting itself can be conducted more as a forum with inspirational discussion and clearance of problems. All groups are urged to make constructive use of the new opportunities.

The second forward step is related to the registration examination and registration. For some time the mechanics of the examination have been carried on the momentum of its original organization in the education office and registration committee. We have known this needs refurbishing to maintain the quality of the professional examination. We are proud of its sustained quality and are indebted to those many volunteer members who have kept it so—to say nothing of the staff in the education office. However, we have not been able to carry out the projected plans for the establishment of an item pool or prepare further developments. We have been running hard to keep in place. The treads are now wearing out and we must move forward. We can no longer depend on the same faithful people who have given so much volunteer time. They have said so, most reasonably. After weighing many possibilities, the board voted to increase the office staff by one and one-half persons. Of course we want the better half. Miss Heermans, who has been asked to carry an ever-increasing load, will be freed to devote more time to examination needs and will be able to work with a wider range of item writers. We will still need volunteers. In this way we can relieve the hand-to-mouth pressure and can be assured of keeping the high quality of our professional examination. This move is in line with our current self-analysis and curriculum studies about which you will hear more (watch AJOT and the intervening Newsletters).

Because we do not want to move backward on other improvements, the increased personnel will

necessitate a raise in the examination and registration fees: the former to fifteen, and the latter to eight dollars. This will allow the practising therapist to relieve the newly graduated student of carrying the full burden of the necessary increase in the fee for examination. The benefits of professional quality through registration are proportionately shared by all practising therapists, therefore the distribution of fees. During the past period of nearly ten years the re-registration fee has remained constant while professional salaries have risen markedly. The AOTA has constantly stimulated this salary increase to keep the occupational therapist's income compatible with that of allied professions of similar educational background. Even our new fee for professional standardization is within the general range, and lower than many. We know you will meet this call for help.

Quality in performance is deeply important to us, as to any profession. I believe we are fully imbued with the ever present desire to make occupational therapy hold to its most demanding clinical significance. Medicine depends on the quality of performance we offer. The structure on which quality is sustained is sound education and professional registration. You have empowered the AOTA to hold these things dear; it is determined to do so for you.

Henrietta McNary, O.T.R.
President.

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*Mid-Year Report of the Executive Director**

This report will cover activities of the Association since the 1954 annual conference, but will depart somewhat from the usual form. It will be presented in two sections. Section I will deal with information on some of our regular activities and business stemming from the Washington meeting. Section II will be a midyear over-all view referring to issues based on present projects and others to come, the nature of which must cause us to give thought. This is a busy period and reflects growing demands and increasing expansion.

SECTION I

Membership. As of March 1, there were 4,495 registered therapists and 3,670 members. This represents an increase of 422 registered over last year, and an increase of 237 members. The discrepancy between registration and membership numbers continues to increase each year.

1951 93 non-member O.T.R.'s
1955 825 non-member O.T.R.'s

An analysis of these figures is available. We are now seeking the help of the occupational therapy schools and state associations whose graduates and members these persons are. The Board is asked to give thought to further ways and means of closing the gaps.

Financial statements: Financial statements, accompanied by a letter from the treasurer, have been forwarded to Board members. These statements cover general and educational funds as of: (a) February 28, 1955, (b) twelve month period ending June 30, 1955, (c) proposed budget for new fiscal year 1955-56, (d) United Cerebral Palsy scholarship fund. Change in the fiscal year effective June 30, 1955, has necessitated a slightly different method of presenting the budget to the Board.

Our financial status at the midyear appears satisfactory. Some rather major readjustments to more adequately meet our growing demands in the coming year, will necessitate budgetary provision.

1955 *Yearbook.* Mrs. Shuff is to be commended on the excellent piece of work she accomplished in handling publication of the Yearbook. It is expected off the press in the first week of April. The names of the medical advisory council and presidents of state and regional associations have been added.

Advertising shows an increase of seven advertisers (50 vs. 57) of which 25 are in the package deal. However, this represents eight pages less than last year (30 vs. 21) as the majority are ⅛ and ¼ page space. Yearbook advertising rates were readjusted to agree with AJOT rates.

Recruitment and publicity. A full report of combined activities of the committee on recruitment and publicity, the national office and the new division of recruitment and publicity is to be found in the report to the National Foundation for Infantile Paralysis under whose grant we are proceeding.

In November, the new recruitment and publicity office became a reality with the addition to our full-time staff of Miss Dorothy Lehman, director, and Mr. William Bowser, secretary. We commend the spirit and enthusiasm with which they have undertaken the mechanics of a new office and absorbed the vast amount of orientation necessary.

Medical advisory council. Summary of the first council meeting has been distributed to council members and is enclosed for the Board. The April issue of AJOT carries a condensation for Association members. Favorable and appreciative comment from the council members and their presi-

*Read at the midyear meeting of the Board of Management of the American Occupational Therapy Association, Atlanta, Georgia, April 3, 1955.

dents has been received in response to the material and letters sent by Miss McNary to each of the above.

Every effort is being made to maintain steady contact by working individually and collectively with the members in various capacities:

Speaker at 1955 AHA-OT institute; speaker at 1955 AOTA conference; inclusion of a medical statement to be used in a recruitment leaflet; recommendations to joint committee on recognition of non-professional personnel; planning of OT panel at American Psychiatric Association convention. AOTA letterhead and Yearbook masthead carry council names.

World Federation of Occupational Therapists. Billing for the 1955-56 year has been completed. Enclosures of interest accompanied the bills. There are 87 U. S. members of which 65 are individual, 19 subscriber, 3 contributing. Because this is the newest of our professional organizations, we have made an effort to keep total membership informed through Newsletter announcements and AJOT reports in the interests of general stimulation and more members. A forthcoming issue of AJOT will carry a feature of the WFOT president in the "People You Should Know" section.

Joint inter-agency action.

1. American Hospital Association institute. The second jointly sponsored institute (AHA-AOTA) will be held in Philadelphia, May 25-29. Miss Heermans and Miss Fish attended the meeting of the joint planning committee with Dr. Petourneaux, AHA secretary, council on professional practice. Miss Spackman is serving as chairman of the local committee. The program is patterned on the successful theme of last year's institute, "Organization and Administration." Printed announcements have been mailed to all AOTA members. Approximately 100 students are anticipated.

2. Joint Commission on Mental Health and Illness. This is a project sponsored by the American Medical Association and the American psychiatric Association to which we were invited to name a representative. Miss Beatrice Wade will represent AOTA on a planning committee. Eighteen of the professional medical auxiliary groups have been invited to participate. The initial meeting is scheduled for April.

AOTA legal status. By action of the Board of Management at the 1954 annual meeting, legal counsel was engaged to study and put our constitution and by-laws in order. Mr. Maurice Feldman, N.Y.C., is conducting this business for us.

Board vote is necessary on the following: (1) amendment of the certifificate of incorporation;. (2) proposed changes in the constitution. Action at the midyear meeting will enable these changes to go before the membership at the 1955 annual business meeting.

Grants.

1. National Institute of Mental Health. A project proposal for the financing of a short-term workshop conference was drawn up by a planning committee comprised of members of the educational and clinical procedures subcommittee on psychiatry. A proposal was submitted February 1. The conference title is "Maximizing the Educational and Clinical Contributions of Occupational Therapy to the Total Treatment Program for Psychiatric Patients."

2. Office of Vocational Rehabilitation, U. S. Dept. of Health, Education and Welfare. A project proposal for the financing of a one-week institute for OT school and clinical training directors was submitted March 15. The institute title is, "A Reassessment of Professional Education and Practice in Occupational Therapy as Related to Rehabilitation." It was drawn up by a joint planning committee comprising OVR staff and AOTA educational consultants.

3. United Cerebral Palsy. Request was made for a continuing grant in support of an undergraduate OT scholarship program for the academic year 1955-56. Proposal submitted February 1.

4. Kellog Foundation. A letter has gone forward to ascertain the interest of the Foundation for a grant in support of a project for the development of criteria, techniques and procedures for the evaluation of OT practice.

Public relations. The listing below represents some of the meetings attended by the national office staff and/or officers:

American Assn. of Medical Social Workers, advisory committee on recruitment, N.Y.C.
American Medical Assn., council on medical education and licensure, Chicago
Columbia University OT School, student lectures, N.Y.C.
National Assn. of Mental Health, annual meeting, N.Y.C.
National Conference of Rehabilitation Centers, Louisville, Ky., represented by F. Helmig
National Health Council, board of directors; committee on education, N.Y.C.
National Rehabilitation Assn., region II, moderator, N.Y.C.
National Social Welfare Assembly, annual meeting, N.Y.C.
National Society for Crippled Children and Adults, annual meeting, Boston
New York Tuberculosis & Health Assn., annual meeting, N.Y.C.
Testimonial dinner to Dr. Henry Kessler, N.Y.C.
United Cerebral Palsy, speaker at annual meeting, Washington, D.C.
United Cerebral Palsy, N.Y. State, speaker at annual meeting, Syracuse

Two additional meetings of unusual interest, and significant of the Association's varied participation, were:

1. Conference on effective use of woman power, U. S. Dept. of Labor, Washington, March 10-11. More than 500 delegates from the U. S. and foreign agencies were present at sessions, one purpose

of which was to encourage participation in new and understaffed professions. AOTA was represented by Major Ruth Robinson, Elizabeth Messick and Miss Fish.

2. Office of Vocational Rehabilitation, U. S. Dept. of Health, Education and Welfare, Washington, December 20. Meeting of a special advisory committee on training grants, with representatives from five medical auxiliary groups, to consider applications from professional schools for teaching grants in their respective disciplines. This marked the first funds to go into operation under the Vocational Rehabilitation Act of 1954. Thirteen OT schools benefited. AOTA representatives were invited from among the OT educational consultants to OVR named earlier this year at the request of that office.

SECTION II

Brief reference will be made to two matters to which we need to give attention. They relate to the more effective conduct of our total Association program and can play an important role in the strength with which it develops.

1. Policy relative to increase in number of OT schools. To date we have been guided by circumstances. It is felt that we should consider taking a more active stand in encouraging additional institutions to offer professional curricula which will meet educational standards of the AMA and AOTA. Such a policy is vital to the number of therapists available in the future and can be a partial control in keeping supply and demand for personnel in more equal balance.

Other professional groups are taking action in this direction. We need to. It infers a long range plan at which we must work steadily and toward which we should start immediately.

2. National office space. We are rapidly outgrowing our quarters. Five persons were on the staff when we moved into the present office suite. Today there are eleven persons occupying the same space. Reports of Association activities during the past several years tell the story better than words. They indicate the increase in activities and services, both general and educational, which revolve around and channel through the national office which carries responsibility for much of the coordination.

Larger quarters are becoming imperative as soon as possible. This should not be additional separate units of square footage, but should be in one unit large enough to adequately meet our growing needs.

Sincere appreciation is expressed to the executive committee, Board of Management, committee chairmen and members for their cooperation and support.

Marjorie Fish, O.T.R.
Executive Director.

Mid-Year Report of the Educational Secretary

Registration examination. Since the 1954 annual conference there have been six meetings of the registration committee. The February examination was prepared and administered and work has been started on the June examination.

The February examination was administered by 39 proctors for 270 examinees. Places other than occupational therapy schools used for this examination were: Charleston City College, South Carolina; Drury College, Missouri; Emory University, Georgia; Florida State University; Reed College, Oregon; Rollins College, Florida; Schreiner Institute, Texas; Texas Western College; U. S. Army Education Center, Germany; U. S. Naval Command School, Rhode Island; University of Alaska; University of Hawaii; Weber College, Utah.

A manual, "Picture Item Construction for the American Occupational Therapy Association Registration Examination," has been completed and will be ready for distribution for the next drive for items which will start soon.

New rater's guide. The new form for rating student performance in clinical affiliations (RPSA) as approved by the education committees at the 1954 annual conference replaced the old clinical training report form on January 1, 1955. All students completing affiliations after that date are being rated on this new form.

Copies of the RPSA were forwarded to all occupational therapy schools for distribution to their student affiliation centers. In order to avoid duplication, the education office mailed a copy of the new rater's guide and a sample copy of a completed report form to all student affiliation supervisors. A complete discussion of the new report form was published in the January-February issue of AJOT for the guidance of student supervisors.

Since it was voted at the 1954 annual joint meeting of the education committees that the schools would be responsible for the scoring of the RPSA's for the first year, the education office prepared and forwarded to each school a scorer's guide, scoring key, sample copy of a scored report form and a rater's guide.

The student affiliation supervisors are rating the students' performance on the RPSA and forwarding duplicate copies to the schools where they are scored and assigned a letter grade in accordance with their own school requirements. A duplicate of the scored report form is then forwarded to the education office for use in evaluation of the student's clinical practice as part of the score on the registration examination.

Since it is desirable that a study be made in regard to how this new report form is working, the duplicate copies of the scored form are being forwarded to the education office monthly for all students regardless of when they are expected to take the registration examination. This system worked well during the year the comparative analysis of the experimental form and the old official clinical training report form was being made and will therefore be continued for a time.

Current status of manuals. The supply on hand of the "Manual for Occupational Therapy Students in Clinical Training" is almost exhausted. Since, however, it was felt that this manual was in need of revision prior to reprinting, the subcommittee on student affiliations was informed of the situation and a special committee was appointed to revise the manual in time for presentation to the education committees at the 1955 midyear meetings.

A sample copy of a completed RPSA has been added to all copies of the "Director's Guide" on hand. Copies of these sample report forms have also been made available to all occupational therapists possessing one of these publications. The subcommittee on student affiliations is at present appointing a special committee to revise this publication.

It was recommended by the subcommittee on student affiliations at the 1954 midyear meeting that the study being conducted by the clinical council of Wisconsin schools on general medicine and surgery be made available in printed form by AOTA for the directors of the occupational therapy schools. This material has just been received in final form. It will be duplicated and made available at cost in the near future.

Representative sample collections of instructional materials given to students in affiliations in each of the five major disability areas have been prepared by a special committee of the subcommittee on student affiliations. It was recommended by this subcommittee at the 1954 annual conference that these materials be made available to directors of clinical affiliation centers on a loan basis from AOTA. Collections of materials used in four of the five disability areas have been received in the national office. An announcement in regard to their availability will be made in the April Newsletter. A fee for handling and postage will be charged on these loan materials.

Scholarships. The $15,000 scholarship fund granted by United Cerebral Palsy for the academic year 1954-1955 was administered by the education office with the assistance of a selection committee. With the depletion of this fund, United Cerebral Palsy was requested to consider a continuation of its support of an undergraduate occupational therapy scholarship program by underwriting the academic year 1955-56.

Publicity was given in the AOTA Newsletter regarding the availability of scholarships in occupational therapy sponsored by the Kappa Delta Phi sorority and the National Society for Crippled Children and Adults. The AOTA staff subsequently reviewed twelve applications for these scholarships.

The chairman of the national president's special project of the Daughters of the Union Veterans of the Civil War has requested details relative to a scholarship project for the training of undergraduate occupational therapists. It was indicated that a scholarship fund may be granted by this organization by the end of August, 1955.

Special services. As requested by the subcommittee on schools and curriculum at the 1954 annual conference, a list of possible special services with minimum and maximum costs computed on a prorated basis (number of students per school) was furnished each school director by the education office.

Consideration of additional services which can be rendered to the schools has raised the question of whether certain changes in the present procedures might not be of greater value to the schools. The increase in numbers taking the examination over the past year or two suggests that individual content analyses of each test administration would be reliable for most schools. Receiving the data in a shorter period of time after test administrations would probably make any remedial action, if required, more timely and meaningful. It was therefore suggested that the area analysis be given for each examination separately just as the relative school standing is now reported for each examination.

Institutes. The education office is cooperating with the chairman of the 1955 institute which is to be a workshop on motivation entitled "The Patient's Point of View."

As a member of the planning committee, the educational secretary assisted with preparations for the second institute for occupational therapists to be conducted by the American Hospital Association in Philadelphia, April 25-29.

Cooperation with committees. The education office has cooperated with and assisted the following committees:

(1) AOTA education committee and its subcommittees.

(2) Planning committee for a conference on "Maximizing the Educational and Clinical Contributions of Occupational Therapy to the Total Treatment Program for Psychiatric Patients." A proposal for a grant to support such a conference was submitted to the National Institute for Mental Health.

(3) Planning committee for an institute on "A Reassessment of Professional Education and Prac-

tice in Occupational Therapy as Related to Rehabilitation." A request for a grant to support such an institute was submitted to the Office of Vocational Rehabilitation, U. S. Department of Health, Welfare and Education.

(4) National Research Laboratory Committee, which was assigned the formulation of policy, objectives, structure, procedures and financing of such a laboratory. A $100 gift has recently been received to be put in a fund for the laboratory.

(5) Special committee appointed by the president to study and make recommendations to the Board relative to the requests from foreign personnel (social workers, nurses, etc.) wishing to come to this country for limited training in occupational therapy.

(6) Scholarship committee appointed for formulation of policy and mechanics of operation and selection.

(7) National Health Council Committee on Education.

Visits and conferences. Since the 1954 annual conference, the Educational Secretary has had the privilege of visiting the following occupational therapy schools: Columbia University; University of Illinois; Milwaukee-Downer College; Mount Mary College; Philadelphia School of Occupational Therapy. Opportunities were offered to talk with administrators, staff and students in these schools.

The educational secretary represented AOTA at the fifty-first congress on medical education and licensure sponsored by the Council on Medical Education and Hospitals of the AMA, Federation of State Medical Boards and the Advisory Board for Medical Specialties. These meetings were held in Chicago, February 5-8.

Inquiries in regard to new schools. Inquiries as to establishing new schools of occupational therapy have been received from the following institutions since the 1954 annual conference: Arkansas Occupational Therapy Association, relative to the University of Arkansas, Little Rock; Boston University, Sargent School of Physical Education, Massachusetts; Cleveland District Occupational Therapy Association, relative to Western Reserve University, Ohio; College of New Rochelle, New York; Keuka College, Keuka Park, New York; University of California in Los Angeles; University of Kentucky, Lexington; Washburn University, Topeka, Kansas. In view of increasing numbers of inquiries from various types of institutions, the education committee has been requested to discuss policy and procedure relative to encouraging the establishment of occupational therapy courses.

Inquiries have also been received from the following countries in regard to policies, procedures and minimum requirements for the establishment of occupational therapy schools: France, Germany, Ireland, Mexico.

Other activities. These, as in the past, include advising prospective occupational therapy students, interviewing applicants for occupational therapy schools, counseling occupational therapy departments planning to develop student affiliation programs, replying to an increasing number of varied requests regarding occupational therapy training, and other general duties associated with the education office.

Mary Frances Heermans, O.T.R.
Educational Secretary.

EDITORIAL

YOUR MAIL

Occupational therapists are very conscious of "rapport." They stress rapport with patients, rapport with physicians, with staff and with ancillary groups. This rapport is established, controlled and heightened by personal contacts, by oral expression, by interpersonal relations. However there is another way rapport is established which unfortunately occupational therapists think very unimportant. That is contacts through letters.

High professional standards are as necessary to maintain through letters as in personal contact. An unanswered letter is as rude, unprofessional and discourteous as ignoring a person who has addressed you. Most of the complaints about unanswered mail come from administrators who write to occupational therapists who have expressed an interest in a new position. These therapists have contacted schools or AOTA about possible positions. Their names have then been sent to interested administrators for contact. Invariably these letters remain unanswered.

If the new position has already been obtained, or the position is not to the applicant's liking, a note or postal card informs the administrator. The answer only takes a few minutes at the most, but maintains excellent professional relations, informs the administrator so he may continue his search, and is a necessary act of kindness and consideration. Failure to do so is rude, selfish and certainly ethically reprehensible.

Our profession is judged through all contacts—personal or through correspondence—so it is vital to maintain rapport in every way. To stress one means, but to fail in another, tears down both efforts. Time is not a factor, ability is within us all, therefore let us not only resolve, but *act* to maintain good relations in all ways by answering letters immediately. Kindness and consideration always reap benefits both personally and professionally.

PEOPLE YOU SHOULD KNOW

HARRIET S. LEE, LT. COL., CHIEF
Women's Medical Specialist Corps

A Biographical Sketch

By

ELIZABETH L. JAMESON, O.T.R.

The membership of the American Occupational Therapy Association salutes the new chief of the women's medical specialist corps, Colonel Harriet S. Lee, who succeeded Colonel Nell Wickliffe, who retired October 31, 1954.

Colonel Lee is a native of Denver, Colorado, the daughter of a prominent attorney in that city. In 1923 she graduated from Ohio Wesleyan University with a B.A. degree in physical education, and was an instructor in that field for some time. Medical aspects of the field attracted Colonel Lee into the Army physical therapy course at Walter Reed Hospital, Washington, D. C., a course which she completed in 1929. Following her graduation she was appointed staff physical therapist at Walter Reed, these positions then being in civilian status.

The West lured Colonel Lee back to Denver in 1931, and in 1934 she became associated with the University of Colorado Medical Center, a position in which she remained until 1937 when she accepted a position on the staff of St. Josephs Hospital in Denver.

Hostilities in the early 40's drew Colonel Lee back into the Army Medical Service in 1942, when she became chief physical therapist at Fitzsimons General Hospital in Denver. When the Army dieticians and physical therapists were granted relative military rank in March, 1943, Colonel Lee was commissioned a second lieutenant in the Army of the United States. She was promoted to first lieutenant in July of that year and became a captain in February, 1945.

In 1946 Colonel Lee was transferred to the office of the Surgeon General as assistant chief in the physical therapy branch. Following the establishment of the women's medical specialist corps in 1947, she was appointed to the regular army. She became a major in 1948.

During 1950, Colonel Lee returned to Fitzsimons General Hospital in Denver as chief of the physical therapy section until her appointment in May, 1952, as chief of the physical therapy section in the office of the Surgeon General, with a temporary rank of lieutenant colonel.

Colonel Lee is immediate past president of the American Physical Therapy Association, and currently serves on the board of directors of that organization. She is a member of Gamma Phi Beta sorority. In addition to her professional accomplishments, Colonel Lee is the mother of a most attractive young daughter, Nancy Talbot Lee, who is a student at the University of Idaho, Moscow, Idaho.

Many occupational therapists have had the privilege of knowing and working with Colonel Lee and found in her that rare combination of charm, simplicity, sincerity and ability. It is impossible to know or work with this remarkable woman, even for a short time, and not be completely captivated by her warm understanding personality, and capable professional and administrative skill.

Colonel Lee has long been a true friend of occupational therapy. She knows and understands our profession, and has worked along with us in the growth and development of both occupational therapy and physical therapy. We extend to her our best wishes for success in this new undertaking.

Efficiency is necessary in all occupational therapy departments because time is always such a factor. Time is needed to prepare material, plan special events, have medical consultations, maintain public and interpersonal relations—all sundry administrative duties—besides treat patients, your primary concern. Because your editorial staff is aware of the many requests on your time, they have brought you an excellent group of suppliers anxious to serve you by mail. Through their catalogs, they bring their stores to you to save you time and energy. Use them and you will use your time more wisely and efficiently.

FEATURED O. T. DEPARTMENTS

OCCUPATIONAL THERAPY IN THE REHABILITATION OF THE BLIND

Pre-vocational Training Program
Minneapolis, Society for the Blind

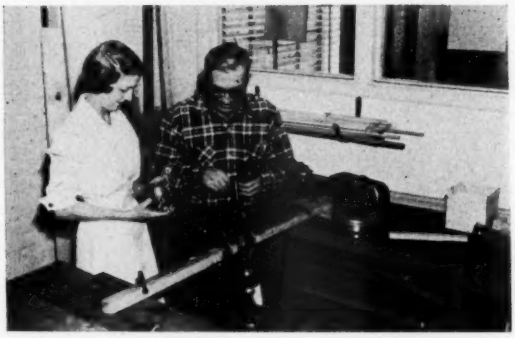
JESSE A. WOODRING, M.A., Supervisor
NANCY J. GREGG, O.T.R.

Occupational therapy is playing a vital part in the rehabilitation of another severely disabled group—the adult blind. Four years ago, the Minneapolis Society for the Blind—a private agency offering employment, social service, recreation and vocational training for the blind in the Twin City area—recognized the necessity for establishing an adjustment training center to meet the needs of the blind.

The rehabilitation center program was launched in January, 1950, with the cooperation and assistance of the Services for the Blind, Minnesota Department of Public Welfare. The new program was named "pre-vocational training" and was designed to meet the special needs of the blind in achieving a reorganization of the individual's senses, developing satisfactory emotional adjustment, and providing instruction in meeting the demands of daily living in a sighted world.

Early in the formation of the program, it was recognized that the training and skills of occupational therapists could be profitably applied in this area of rehabilitation. Utilization of occupational therapists in work with the blind was and still is relatively new. Experience during the past four years with occupational therapists on the pre-vocational training staff has shown to what extent their training can be effectively brought to bear on the rehabilitation of the blind. If we examine the resulting effects of blindness on the emotional make-up of the individual, we have a clear cut picture of how occupational therapy has and is now meeting the basic needs of the sightless.

When blindness occurs, the individual also loses his self-esteem, self-confidence, independence and social status. He loses his ability to travel unassisted and his communication with the "outside" world becomes difficult through inability to read, write or often even to dial a telephone. The loss of employment or the inability to carry out household duties is a severe blow to the ego, especially when blindness hits the wage earner and the family is forced to resort to public assistance. Having lost his self respect, the blind person often disregards his personal grooming, isolates himself from society, and becomes introverted, bitter and resentful. His behavior is often marked by periods of moodiness and depression. In a family situation,



The therapist found that this young man had previous experience as a sighted person in mechanics and was still interested in such activities. As a project in OT he is overhauling this out-board motor which helps to develop tactile perception, finger dexterity and arm-hand coordination. At the same time he proves to himself that work of this kind can still be done by the blind.

he often feels useless to his spouse and children and considers himself a burden, therefore becoming very despondent. Inactivity caused by blindness often results in the softening of muscles, loss of manipulative skills including muscular coordination, kinesthetic memory, finger dexterity and muscle alertness. Work habits, stamina and frustration tolerance are also lost through disuse. Lethargy replaces an optimistic, competitive spirit. Leisure time becomes occupied with phantasy or unrealistic planning. The individual, incapacitated in these ways as a result of blindness, is a loss to himself, his family and his community. However, there always remains a potential for change through directed reorganization leading into a return to productive, self-sustaining living.

The blinded individual's regression is often in part due to his presence in an over-protective environment of well-meaning but uninformed relatives and friends who force dependency by preventing him from attempting to learn how to do things for himself. Ensnarled in such an unstimulating atmosphere, degeneration of the individual is almost certain.

Our first step then in the treatment of the adult blind is to remove him from his sheltered home environment and place him in the controlled stimulating setting of the Pre-vocational Training Center. Here associations with other independent, employed blind people who live in the same housing unit soon motivate the new client toward overcoming his handicap. Of necessity, he is forced to learn to function independently because here,

*Supervisor, Pre-Vocational Training Program, Minneapolis Society for the Blind.

Weaving a wool scarf on a peacock loom is one of many OT projects and activities the blind engage in as a part of their adjustment training which help to restore self esteem and independence.

away from home, there are no protective parents to do each little task for him. To survive the training period of perhaps one to six months, he must acquire self-sustaining skills. At this point we have the client in a setting where problems can be dealt with.

His daily routine includes occupational therapy and classes in home economics, braille, typing, orientation and foot travel, and recreation. The subjects taught were selected for their practical value to the blind but are utilitzed in treatment of the blind in the same manner as a particular craft is used with a patient by an occupational therapist—only as a means to an end. In addition to the classroom activities and OT, the blind attending the Pre-vocational Training Center also receive lectures which provide useful information about such things as aids and devices, legislation, guide dogs, employment opportunities and other related subject matter. Group therapy forms another integral part of the program and has proved to be a useful tool in bringing about acceptance of blindness, release of anxiety and change in attitude along with development of insight.

With the effects of blindness clearly described, the individual's needs have become quite apparent. In our controlled Pre-vocational Training Center environment, the skilled occupational therapist can now begin her treatment of the client. Since the problem of blindness is essentially psychological in nature rather than physical, our primary objective in treatment is ego enhancement or restoration of self-esteem, self-confidence and a feeling of personal worth. With this objective reached, the client has sufficient foundation to withstand intermittent failures, blunders and discouragements. Establishing this basework is essentially a job of giving the client support, recognition and understanding. The therapist must provide a stimulating atmosphere and early opportunity for achievement. Learning to dial a telephone, thread a needle, sew on a button, write a letter by means of a corrugated script board, read a braille watch, or tie a necktie all provide early opportunities for success and a feeling of accomplishment with the resulting effects of ego enhancement and a start toward regained independence.

With each completed task, the blind individual gathers strength to meet a more difficult challenge such as the construction of wood projects, rug weaving, billfold lacing, knitting or crocheting. Projects involving assembly, weaving, knotting or sewing not only foster needed feelings of success and achievement but also develop finger dexterity,

Working with hand and power tools these three legally[1] blind men are regaining self assurance in their ability to do work with their hands.

tactile perception, coordination, strengthening of muscles and work tolerance. Most of the skills developed are directly transferrable to the performance of jobs in industry and business, or predispose the person to more effective and efficient vocational training. Activities and projects in occupational therapy also provide for the release of tension, hostility and aggression when cutting, pounding, beating, etc., are involved. This emotional release is often pre-requisite to any constructive attempt on the part of the blind client to overcome his handicap. Another benefit to the blind is the development of leisure time activities and interests.

Often the occupational therapist's job with the

1. In working with the visually handicapped we not only deal with those who are totally blind but with those who are partially sighted. Technically all persons with visual limitations below a certain point are termed blind or legally blind. The definition of blindness is as follows: A person is termed blind or legally blind who, with the best possible correction, has a visual acuity rating of 20/200 or less in the better eye, or a person who has greater visual acuity than 20/200 but whose visual field is so constricted that the greatest diameter of the visual field subtends an angle no greater than 20°. This definition of blindness is used by the income tax bureau, public assistance agencies, and by state vocational rehabilitation agencies. All of our clients at the rehabilitation center meet the definition of legal blindness, which is required if their training and maintenance costs are to be met through the vocational rehabilitation division of the state services for the blind.

blind becomes a difficult one when she encounters a person with extremely strong feelings of inferiority existent with the individual long before loss of sight. Prolonged individual counseling is often necessary in cases like this or with those newly blinded who are in the stages of depression or mourning. Sometimes attitude changes on the part of the therapist will bring about the desired change in the client's behavior. For example, with a depressed client who is pitying himself, a change from a reassuring, sympathetic approach to one of passive firmness will often turn the client's pity for himself into resentment and criticism for the therapist. These exposed energies can then be directed into constructive therapeutic activities resulting in eventual regeneration of the ego.

Once the blind client's self-confidence, self-esteem, emotional stability, sense of accomplishment and motivation have been restored, the individual is well on his way toward independent constructive living. The value of occupational therapy properly applied to the blind cannot be underestimated in terms of facilitating psychological, social and economic adjustment of the individual. Our experience with occupational therapy in the rehabilitation of the blind and visually handicapped at the Minneapolis Society for the Blind has proved its effectiveness with this disability. With some estimated 22,000 persons losing their sight annually in the United States, the need for greater and more widespread application of the skills and training of occupational therapists in this field is clearly apparent. It is hoped our experience will foster other agencies and training centers to use occupational therapists in the rehabilitation of the blind.

PARENT INSTITUTE AND CEREBRAL PALSY PRE-SCHOOL PROGRAM

Michigan State Normal College
Ypsilanti, Michigan
by
MRS. FRANCES HERRICK, O.T.R.

For the past several summers the Department of Special Education and Occupational Therapy at Michigan State Normal College has put considerable emphasis on credit offerings in the field of cerebral palsy. Out of this interest and with encouragement from the National Society for Crippled Children and Adults, Inc., grew the annual Parent Institute and Cerebral Palsy Pre-School Program, now being planned for the fifth consecutive summer. The Michigan Society for Crippled Children and Adults has backed the program financially.

As is indicated from the title, the program is two-fold. Since it lasts only two weeks, it in no way attempts to solve problems, but rather to offer suggestions of possible approaches to effective treatment and care. For the parents, there are lectures, movies, discussions, observations and conferences, all built around the general challenge of cerebral palsy and more specifically bearing upon each individual situation. Speakers are drawn from Michigan agencies working with cerebral palsied, and from regular and special summer staff for college courses.

For the children, ranging from three to eight, a pre-school experience gives both the teachers and parents an opportunity to determine or recognize school readiness. The child's ability to respond within a music circle group, his reaction to group games, his interest in pasting, finger painting or puzzles, all help the teacher-parent conference to be meaningful. In addition, each child whose referring doctor so prescribes, will be assigned periods with physical therapy, occupational therapy and speech. Each parent may observe demonstrations in the above treatment areas, and conferences attempt to show how the child can be helped at home and whether he can qualify for school or not.

Finding candidates for such a program has been accomplished through cooperative efforts of state and local health agencies. Provisions have been made for mothers and children to be housed in one of the campus dormitories adjacent to the program's activities. The expense of this portion of the project has usually been sponsored by local chapters of the Easter Seal Agency. There have also been commuters. All have joined together to ask for help and to offer suggestions to others in the group.

Father participation has been gratifying, two having attended the full two weeks. Other fathers have joined the group for special movie nights or for week-end group discussions in sufficient numbers to warrant the belief that parents of cerebral palsied children are eager to more fully understand their challenge.

Out of approximately 75 children who have been in attendance, several have been enrolled in the Horace H. Rackham School for Handicapped Children on the Michigan State Normal College campus. Others have been started on treatment programs or schooling in their own communities. Whether in hospital, outpatient center, school or home, chances are that the families feel better acquainted with the agencies on whom they may call for help, and more confident that the procedure they are following is the wise one.

The exact benefits of such a program are somewhat intangible but worth all the effort put forth. Willingness to help plan for successive programs and frequent repeated participation are partial evidence of satisfaction gained from such a program.

Basically, the program has been the same from summer to summer with changes and omissions as need and requests arise. The original planning had in mind service for those for whom no adequate program had yet been started. Each year there has been a portion of the group for whom a realistic program is already underway. These have been inspiration to those who are still groping. Even though the direct benefit to the child may be minimal, the indirect help may be of great value, because the parent has learned enough about the problems of cerebral palsy to at least face the challenge with more courage and faith. When that amount has been accomplished, the effort put forth has been worthwhile.

Opponens Spacer . . .

(*Continued from page* 114)

often desirable, even though active function is not possible at that time. The spacer is useful as a therapeutic device to establish and maintain a position of function in such cases. If the hand is thusly maintained, physical and mental maturation may, with intensive, long-continued training, result in useful function.

Use of the spacer results in a habit-pattern formation which persists for a variable time after the spacer is removed. Several children have been unable to reproduce the original malfunction after as long as a week without the spacer.

The spacer has been designed to eliminate or minimize many routine objections to any appliance. Light, sturdy, unobtrusive, easily applied and readily cleaned, the spacer has aroused little antagonism on the part of patient or parent. The spacer may be wiped clean with a damp soapy cloth. Either cuff laces or elastic straps may be replaced by the parent when necessary. Experience has shown that it is better to replace the elastic than to wash it. Gripper fasteners for home use may be purchased at the notions counter of a department store.

Spacer training is accomplished in the occupational therapy department. Ideally, the child should receive some occupational therapy before obtaining a spacer so that satisfactory rapport may be established, an accurate baseline evaluation of his accomplishments may be recorded, and so that he may be prepared psychologically for his spacer.

The training activities must be selected in accordance with the mental and physical capabilities of each child. The less severely handicapped will progress rapidly, as they utilize the functional opposition made possible by the spacer, to acquire new skills. The more severely involved will require more intensive, and in some cases, specially adapted training. Teaching wrist extension as an aid to grasp, and wrist flexion to facilitate release, has proven useful in some cases. All activities are selected with ultimate independence in daily living in mind.

Achievement of useful finger-tip prehension by means of the opponens spacer requires a cooperative and well-motivated patient. The spacer can only assist, it cannot initiate function.

SUMMARY

1. A device to facilitate opposition in the cerebral palsied or hemiplegic child has been presented.
2. The indications for use have been set forth.
3. The major variations of this device have been described.
4. The method of making and fitting this device has been presented.
5. The use of the opponens spacer has been discussed.

Printing Press . . .

(*Continued from page* 128)

Conclusions

(1) In the floor press, resistance to the treadle may be increased by means of weights added to the brake. The resistance may be graded from two to twenty pounds to accommodate the increased muscle power of the patient. Dr. DeLorme's theory of maximum resistance may be applied in the strengthening of the quadricep muscles by this adaptation.

(2) In the floor press exercise, muscle contraction and relaxation is obtained by alternate motion of knee extension and knee flexion. This motion is carried out through the normal operation of the floor press. Bearing the weight of the body on one leg during the operation of the floor press serves as a pelvic stabilizer and localizes the motion to the hip, knee and ankle.

(3) A series of elevated steps to the floor press treadle gives the therapist an opportunity to grade the amount of knee motion required for operation of the floor press.

(4) The number of repetitions vary according to the amount of material printed. If the patient is in the late stages of rehabilitation and is exercising for tolerance, the number of repetitions is determined by fatigue; if muscle power is the aim of treatment, Dr. DeLorme's maximum resistance is applied.

* * *

Acknowledgement: The author wishes to express appreciation to Sgt. Charles A. Wright, the medical illustration section, and to Sgt. Hershel Bevil and Cpl. Leonard Mandelbaum, occupational therapy technicians, Murphy Army Hospital, Waltham 54, Mass.

Thirty-Eighth Annual Conference

American Occupational Therapy Association

October 22-28, 1955

The Sheraton-Palace Hotel

San Francisco, California

General Theme

BRIDGES TO THE FUTURE

Program

(Tentative)

Pre-Conference Meetings

Friday, October 21

Subcommittee on Graduate Study....7:00 p.m.-10:00 p.m.

Central Education Committee.....7:00 p.m.-10:00 p.m.

Saturday, October 22

Education Committees

Subcommittees, Schools & Curriculum.....
.....9:00 a.m.-11:30 a.m.
12:30 p.m.-2:30 p.m.

Subcommittees, Student Affiliations.....
.....9:00 a.m.-11:30 a.m.
12:30 p.m.-2:30 p.m.

Joint Meeting of Education Subcommittees.....
.....3:00 p.m.-4:00 p.m.

Clinical Procedures Committee.....7:30 p.m.-10:00 p.m.

Legislation and Civil Service Committee.....
.....7:30 p.m.-10:00 p.m.

Recruitment and Publicity Committee.....
.....7:30 p.m.-10:00 p.m.

Special Studies Committee.....7:30 p.m.-10:00 p.m.

Sunday, October 23

House of Delegates.....9:00 a.m.-11:00 a.m.
2:00 p.m. 5:00 p.m.
7:30 p.m.-10:00 p.m.

Education Committee.....9:00 a.m.-12:00

O.T. in Psychiatry Committee.....2:00 p.m.-4:00 p.m.

Clinical Procedures Committee.....7:30 p.m.-10:00 p.m.

Monday, October 24

Registration.....8:00 a.m.-5:00 p.m.

Board of Management.....9:00 a.m.-11:00 a.m.
2:00 p.m.-5:00 p.m.
7:30 p.m.-10:00 p.m.

Permanent Conference Committee.....11:00 a.m.-2:00 p.m.

Pre-conference Institute

Theme

THE PATIENT'S POINT OF VIEW

Monday, October 24

This program will be set up as a workshop in which each member will have an opportunity to discuss his special problems in a small group. In addition, experts in allied fields will be available for consultation.

The meeting will open with a panel discussion composed of speakers in the field of psychiatry, psychology, social service, education, anthropology and occupational therapy. The group will then break up into small discussion groups according to their needs and desires.

Institute Meetings.....8:30 a.m.-11:00 a.m.
3:30 p.m.-5:00 p.m.
7:30 p.m.-9:00 p.m.

Conference Program

Theme

BRIDGES TO THE FUTURE

Tuesday, October 25

Registration.....8:00 a.m.-5:00 p.m.

Commercial Exhibits.....9:00 a.m.-5:00 p.m.

Educational Exhibits.....9:00 a.m.-5:00 p.m.

Chairmen of Standing Committees.....11:00 a.m.-1:00 p.m.

Institute Meetings.....8:30 a.m.-11:00 a.m.

Afternoon session.....2:30 p.m.-5:00 p.m.

General Session

Official Welcome: Dr. John Wahlquist, President, San Jose State College

Conference Chairman Welcome: Mrs. Louise Burton Wade, O.T.R.

Invocation: The Rev. Brendon Mitchell, O.F.M.

Annual Business Meeting
Presider: Henrietta McNary, O.T.R., *President*, A.O.T.A.

A.O.T.A. Party for Exhibitors.....5:00 p.m.-7:00 p.m.

Evening Session.....8:00 p.m.-10:00 p.m.
Slagle Lecture: Florence M. Stattel, O.T.R.
Keynote Address: "Bridges to the Future"
Speaker to be announced

Wednesday, October 26

Registration.....8:00 a.m.-5:00 p.m.

Commercial Exhibits.....9:00 a.m.-5:00 p.m.

Educational Exhibits.....9:00 a.m.-5:00 p.m.

Morning session

There will be no formal session, but plans are being made for a Bay cruise for all those wishing to go 10:00 a.m.-12:00

Afternoon session

Sectional Meetings.....2:30 p.m.-5:00 p.m.

Orthopedics.....2:30 p.m.-5:00 p.m.

Topic: "Hand Surgery and Its Relationship to O.T."
Dr. Sterling Bunnell

"Clinical Demonstration on Functional Arm Braces"
Dr. Edwin Schottstaedt
Mr. George Robinson
Miss Jeanine Dennis, O.T.R.
Mrs. Evelyn Alexander, O.T.R.

Tuberculosis.....2:30 p.m.-5:00 p.m.

Topics to be announced

Dr. Harry A. Wilmer, author of *This Is Your World*

Panel on Prescriptions.....3:45 p.m.-5:00 p.m.
Dr. S. Malvern Dorison, Moderator
Dr. H. K. Elkins
Dr. Roger H. L. Wilson
Dr. Karl E. Carlson
Miss N. Meryl Van Vlack, O.T.R.
Miss Gwen Wright, O.T.R.
Miss Anne Murany, O.T.R.

Evening session

Ship's Party for Exhibitors.....6:00 p.m.-7:00 p.m.

Conference Banquet.....7:00 p.m.

Thursday, October 27

Registration.....8:00 a.m.-5:00 p.m.

Commercial Exhibits.....9:00 a.m.-5:00 p.m.

Educational Exhibits.....9:00 a.m.-5:00 p.m.

Morning session

Sectional Meeting

Neurology Panel.....8:30 a.m.-11:00 a.m.

Topic: Functional Restoration of the Hemiplegic"
Dr. Walter Treanor
Dr. Raoul C. Psaki
Capt. Mary A. Reilly, WMSC
Lt. Adelaide M. Ryerson, WMSC

Topic to be announced
Miss Margaret S. Rood, O.T.R.

Geriatrics.....8:30 a.m.-9:30 a.m.

Topic: "Senior Citizens Have a Future"
Speaker to be announced

National and International Grants for O.T.'s.....9:45 a.m.-11:00 a.m.

Speakers to be announced

Editorial Staff Meeting.....11: a.m.-1:00 p.m.

Schools Luncheon.....12:00-2:00 p.m.

Board of Management.....2:00 p.m.-5:30 p.m.

Afternoon sessions

Sectional Meetings

Psychiatry.....2:30 p.m.-5:30 p.m.

Topic: "The Changing Concept of the O.T. in Psychiatry"

Speaker to be announced

Pediatrics.....4:15 p.m.-5:30 p.m.

Topic: "The Occupational Therapist—A New Team Worker in Growth and Development"

Speakers to be announced

Evening session

House of Delegates.....7:00 p.m.-10:00 p.m.

Cerebral Palsy.....2:30 p.m.-4:00 p.m.

Topic: "Coordinating our Resources for the Cerebral Palsied"

Dr. Peter Cohen

Dr. Marcia Hayes

Dr. Carl E. Anderson

(two O.T.'s to be announced)

Special Meetings.....7:30 p.m.

Veterans Administration

Army
Navy
Air Force
World Federation of Occupational Therapists

Friday, October 28

Morning session.....8:30 a.m.-11:00 a.m.

Closing of Conference

Program by Southern California O.T. Association

Afternoon session

There will be no formal session. Arrangements are being made for visits to occupational therapy clinics in the vicinity of the Bay area.....1:00 p.m.-5:00 p.m.

SHERATON-PALACE HOTEL

Market at New Montgomery
San Francisco, Calif.

Kindly reserve for the AMERICAN OCCUPATIONAL THERAPY ASSOCIATION Conference, Oct. 21-Oct. 28, 1955

Single and Bath $7.50-$15.00 .....

Double and Bath $10.00-$17.50 .....

Twin and Bath: $10.50-$18.00 .....

Parlor Suites: $19.00-$26.00 (Parlor and Bedroom and extra cot) .....

Luxury Suites: $37.00-$65.00 (Parlor and 2 Bedrooms) .....

(All minimum rate rooms limited in number and if room rate requested is not available, reservation will be made at next available rate.)

Arrival Date .....Departure Date .....

Name .....

Address .....

Local conference chairmen of the Northern California Occupational Therapy Association meeting with Mrs. Winifred Kahmann on her recent visit in San Francisco to assist in conference plans. From left to right, third row: *Belle Rhodes (transportation), Louis Reale (educational exhibits), Shirley Sherrill (special meetings), Constance Martin (special programs), Marjorie Rowton (hospitality), Hope Duveneck (publicity).* Second row: *Evelyn Moose (registration), Ann Murany (co-chairman-program), Florence Frye (sub-program), Mary Booth (institute), George Crothers (printing).* First row: *Louise Wade (local general chairman), Anne Turchi (program), Eleanor Mann (co-chairman).*

WELCOME FOR THE OTHER HALF

Married therapists, bring your spouses to the annual conference in fabulous San Francisco. Tourists' rates for two are attractive and no wife or husband will find the days dull or lonesome.

In 1953 at Houston, two people got to talking about the problems of going to a conference with their respective therapist-spouses. One was the wife of Laurel Nelson, the other the husband of Becke Holdeman. They organized this small group, called the Ancillary Occupational Association (ACA) whose purpose is to:

(1) Be of service to therapists during conference time.

(2) To provide entertainment for its own members.

To augment this national association, there will soon be a meeting, in San Francisco, of local spouses who will plan a program for those who will accompany their therapist wives or husbands. There will be places to go, things to do, some duties to perform, and a choice of activities that should prove irresistible to all. Start planning to attend the conference, both of you. No part of the twosome will be lonesome.

Lobotomized Patient . . .

(*Continued from page* 120)

in some hospital industry activity taking into consideration (*a*) his level of adjustment to himself, the therapist and the other patients, (*b*) his level of performance, (*c*) his past skills,(*d*) his present interests, (*e*) the physician's prognosis, (*f*) the available activities which most closely fit the patient's needs, (*g*) the ultimate objective for the patient, (h) the amount of supervision the patient requires in the new assignment. The patient should be prepared for his new assignment in advance of his actual placement in the new activity.

SUMMARY

The lobotomized patient presents some unique and interesting challenges to the occupational therapist. Due to organic brain damage as the result of surgery, and the relief of symptoms with some corresponding unwanted side effects, the occupational therapy program for the lobotomized patient must be organized to meet his ever changing needs. Some of the early problems that the therapist will encounter will be incontinence, outspokenness, disorientation, lethargy and a lack of initiative. The general principles underlying an activity program for lobotomized patients have been discussed with methods of scheduling, group dynamics, organizing the occupational therapy clinic and the advancement from the program elaborated upon. The program for the lobotomized patient should be based on the basic occupational therapy principles for psychiatric patients, with the special problems presented by the lobotomy patient treated in the manner recommended in this paper.

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Proprioceptive Facilitation . . .

(*Continued from page* 126)

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The film "Three to Make Ready" from the Institute for the Crippled and Disabled, New York City, was erroneously listed in the March-April issue as free. It is available for rental at $6.00 for black and white, or for purchase at $125.00. It is also available in color at slightly higher fees.

DELEGATES DIVISION

HAWAII

Delegate-Reporter, Catharine Nourse, O.T.R.

During the past year the Occupational Therapy Association of Hawaii fulfilled many of the objectives of the association. The board of management and the chairman of each committee met monthly to discuss their plans, change in policies and pertinent problems. Much was accomplished and gave the members the opportunity to work harmoniously together.

Scholarship. The scholarship for 1954 was awarded to David Murata who is presently studying at Western Michigan College.

Calendars. The sale of calendars has been most successful. Almost 1,500 were sold.

Publicity. Publicity was efficiently handled through radio, television, newspapers, voice on the telephone, and exhibits in various stores.

Delegate. The Occupational Therapy Association of Hawaii was represented by the delegate at the 1954 annual conference of the American Occupational Therapy Association, Washington, D.C.

Meetings. The bi-monthly general meetings were well planned by the program committee and varied programs were presented.

Banking. The association funds were transferred to a bank giving us an eleemosynary account. This was necessary due to increased costs of handling funds.

Subscriptions. Two gift subscriptions of the *American Journal of Occupational Therapy* and the *Journal of Physical Therapy* were presented to the Honolulu County Medical library.

Community activities. The association participated in: a panel workshop with the National Society for Crippled Children and Adults; celebration of Business and Professional Women's Week; in the drive to send clothes and materials to the Rehabilitation Center in Korea; and donated $10.00 to the World Federation of Occupational Therapy.

An occupational therapy representative was sent to the Theta Sigma Phi sorority workshop on public relations.

OFFICERS

President.....Esther Castle, O.T.R.
Vice-President.....Marietta Eng, O.T.R.
Secretary.....Hope Lee, O.T.R.
Treasurer.....Genevieve Lin, O.T.R.
Delegate.....Catharine Nourse, O.T.R.
Alternate Delegate.....Juanita Baumgartner, O.T.R.

ILLINOIS

Delegate-Reporter, Elizabeth L. Jameson, O.T.R.

The Illinois Occupational Therapy Association spent another very busy year during 1953-54. Membership included 80 active, six associate, two honorary, for a total of 88. During the year ten meetings were held, with an average attendance of approximately 50 persons.

All committees, standing and otherwise, were extremely busy and active throughout the year. The professional standards committee, chaired by Miss Beatrice Wade, O.T.R, worked diligently on the national problem of accreditation, and submitted a report of findings and recommendations to the national committee. The public education committee, headed by Miss Margaret Earlenbaugh, O.T.R., concentrated their efforts on recruitment and completed a splendid new traveling exhibit for Illinois recruitment. This exhibit has been making the rounds of the state and wherever it could be effectively shown.

The finance committee, under the able leadership of

Barbara Loomis, O.T.R., continued its excellent progress of 1952-53, with the origin and publication of a packet of cartoons on OT which have proved to be most popular. This committee also sponsored a very successful raffle again this year. The IOTA board and membership again voted the usual $50.00 contribution to AOTA to assist in defraying the expenses of national, and $200.00 toward the national scholarship fund.

The new vital statistics committee was hard at work surveying the state to locate all persons actively engaged in OT, registered and otherwise, as well as locate all hospitals and programs which utilize occupational therapy as part of their treatment.

The new downstate group of occupational therapists has continued to meet on an unorganized basis, until details have been worked out nationally for districts. This group has displayed great enthusiasm and ingenuity in developing their programs. A most successful joint meeting between this group and IOTA was held this past fall in Decatur, Illinois.

As customary, IOTA participated in the AHA tri-state assembly meeting held on May 4-5 in Chicago. Immediately following the assembly, May 6-8, the first institute, sponsored by AHA and AOTA, was conducted at the Palmer House, Chicago. The theme of the institute was "OT Administration." Approximately 90 occupational therapists attended this most successful session. IOTA entertained the faculty of the institute at a cocktail party and dinner the evening of May 5 at Lewis Towers, Chicago.

One of our most active members, Miss Barbara Loomis, O.T.R., was awarded the polio scholarship to the University of Southern California, and spent three months out there last spring. Barbara came back most enthusiastic about the work being done there.

Our goals for 1954-55 are very similar to those for the preceding year:

(1) Increased participation in recruitment efforts and public education.

(2) Continuation of the work being done by the professional standards committee toward better Illinois civil service standards; interest and further development of the work being accomplished on accreditation and the development and appointment of a medical advisory council to our state association.

(3) Continuation of the work being done by the vital statistics committee.

(4) Continued efforts toward the development of more educational programs within our local association.

OFFICERS

President	Dorothy Hruby, O.T.R.
Vice-President	Joan Otis, O.T.R.
Secretary	Elizabeth McInnes, O.T.R.
Treasurer	Michaela Apfeld, O.T.R.
Delegate	Elizabeth L. Jameson, O.T.R.
Alternate Delegate	Jeanne Donlon, O.T.R.

MICHIGAN

Delegate-Reporter, Rosalia A. Kiss, O.T.R.

The Michigan Occupational Therapy Association continues to grow in size and enthusiasm. We feel there is a healthy increase in the interest of professional growth, and in relationships with the allied professions, as evidenced by attendance at conferences of our own and other organizations.

The present active membership is 144, and the associate membership is 30. This enlarged membership has meant greater participation on the committees and a broadening of the state program. It motivated the vote to return to the custom of convening twice a year which had been abandoned in 1941 because of travel restrictions and limited staffs. This permits a meeting in the fall following the American Occupational Therapy Association conference to bring timely news of activities on the national level to the members, and a continuance of the annual business meeting held in the spring.

The spring meeting was held at the Henry Ford Hospital in Detroit. The business meeting was followed by a program on rehabilitation in the various medical fields. The outstanding success of the first fall meeting at the Kellogg Center at Michigan State College in East Lansing encourages a return to that centrally located site for future programs.

Two meetings have been held for directors from hospitals training students from the three Michigan schools of occupational therapy. The first was an orientation in the use of the new "Report of Performance in Student Affiliations," and the second was an evaluation and discussion of the forms after a period of use.

The finance committee was particularly active in its effort to raise funds for the extension of the scholarship program. Praise is due the chairman for her fervor and business acumen. The recruitment committee, whose past efforts have been outstanding, is embarking on a more extensive program of contact and public education utilizing the organization of the regional groups.

Five regional groups have active programs, meeting monthly or bimonthly throughout the year. Their programs, in general, emphasize professional growth, fund raising and recruitment.

OFFICERS

President	Barbara Jewett, O.T.R.
Vice-President	Mrs. Millah Nikkel, O.T.R.
Secretary	Mary Jane Clark, O.T.R.
Treasurer	Mrs. Evelyn Lane, O.T.R.
Delegate	Rosalia Kiss, O.T.R.
Alternate Delegate	Marjory Holtom, O.T.R.

NEW JERSEY

Delegate-Reporter, Gail S. Fidler, O.T.R.

The New Jersey Occupational Therapy Association has been primarily concerned with the problems of recruitment, establishment of equitable state salary levels, and integration with other professional groups within the state.

During the past year several of our therapists have appeared as guest speakers at high school career days, and have also met with other interested student groups. In addition, the association sponsored an "open house" at which time occupational therapy departments throughout the state were open to the public.

Our committee on standards has been active in an attempt to raise state salaries to a level comparable with other professional groups.

In an effort to integrate our interests and endeavors with other professional groups within the state the association has sponsored joint meetings with rehabilitation workers, physical therapists, and speech therapists. These meetings have been most encouraging and we hope that this will be the beginning of a closer working relationship with allied professional groups.

Miss Naida Ackley has been appointed state historian and is busy collecting data from various sources. In addition the association is working with the Pennsylvania Association in planning an eastern state regional meeting in conjunction with the American Psychiatric Association conference.

OFFICERS

President.....Lucille Boss, O.T.R.
First Vice-President.....Gloria Sosnowski, O.T.R.
Second Vice-President.....Rhoda Goldstein, O.T.R.
Secretary.....Fred Odhner, O.T.R.
Treasurer.....Fay McLaughlin, O.T.R.
Delegate.....Gail S. Fidler, O.T.R.
Alternate Delegate.....Naida Ackley, O.T.R.

UTAH

Delegate-Reporter, Joyce H. Andrews, O.T.R.

The Utah Occupational Therapy Association is a small but rapidly growing organization. From four therapists in 1951 our numbers have grown until today there are sixteen active members.

In addition to the annual meeting, regular meetings are held every other month in one of the six hospitals and clinics with occupational therapy departments. Planning for a state organization has been the chief topic of the meetings but now that the U.O.T.A. has been officially accepted, the program committee has tentatively scheduled topics of interest to therapists in all phases of occupational therapy. A social meeting is also held annually. Last year all members and their guests attended a canyon party.

The recruitment and publicity committee, with the cooperation of all members of the association, has been busy talking to student and graduate nurses, medical students, speech therapists and other allied professional personnel to explain the role of the occupational therapist on the medical team. The general public has been made aware of our activities through several newspaper articles and television shows. In keeping with the national program, folders containing recruitment literature and letters to student advisors are ready to mail to all high schools, junior colleges and universities in the state.

"Should Occupational Therapy Pay for Itself?" was the theme of the OT section of the 1953 Western Hospital convention. Following the meeting, a joint luncheon was held with the Utah Physical Therapy Association.

By convention time it is hoped that much more can be told of the progress of the U.O.T.A. which will be well represented this year.

OFFICERS

President.....Frank W. Jackson, O.T.R.
Vice-President.....Betty L. White, O.T.R.
Secretary.....Ann W. Brann, O.T.R.
Treasurer.....Leland Bowles, O.T.R.
Delegate.....Joyce H. Andrews, O.T.R.
Alternate Delegate.....Betty L. White, O.T.R.

NFIP FELLOWSHIP

The National Foundation for Infantile Paralysis announces the availability of a limited number of fellowships in the field of occupational therapy teaching. These fellowships, which may be approved for one to three years, are made available to help prepare properly qualified candidates as instructors and administrators in occupational therapy schools.

These fellowships are awarded as a part of the National Foundation's program of professional education for which $22,700,000 in March of Dimes funds have been appropriated since 1938 through 1954.

Applicants for fellowships must be U. S. citizens (or applicants for citizenship). Eligibility requirements also include: sound health; a baccalaureate degree; membership in or registration by the American Occupational Therapy Association; and significant satisfactory general experience as an occupational therapist, preferably for three years or more.

Each candidate must propose a program which will include basic academic and clinical study, specialized training in one or more fields of occupational therapy, and supervised experience in teaching and school administrtion.

Financial benefits are based on the individual need of each applicant and may include tuition, books, travel expenditures incidental to the program, and maintenance.

Applications may be submitted at any time during the year but must be submitted by March 1 for consideration in May; by September 1 for consideration in November; and by December 1 for consideration in February.

For further information and application forms write The National Foundation for Infantile Paralysis, Division of Professional Education, 120 Broadway, New York 5, N. Y.

SUMMER LABORATORY PROGRAM

Columbia-Teachers College Center for Improving Group Procedures is offering a summer laboratory program from July 11-22 on "Improving Staff Relations;" from August 1-12 on "The Role of the Consultant."

The program is open to anyone involved in staff relations and those who are required to advise, give counsel, or serve as resource persons. Apply:

Center for Improving Group Procedures
Columbia-Teachers College
New York 27, New York

Book Reviews

"S.O.R.T. ROOM" ACTIVITIES AID YOUNG PATIENTS
By Renate T. Liebman, O.T.R.
Supervisor, Occupational Therapy Dept.
Elgin State Hospital, Illinois
Mental Hospitals
February 1955

Reviewed by: Bertha J. Piper, O.T.R.

"S.O.R.T. Room" means a School-Occupational Therapy-Recreational Therapy Unit, established in May, 1954, at Elgin State Hospital for mentally ill children. The author elaborates on the effective program in operation there "geared to children's interests," under the supervision of the registered occupational therapist in charge and assisted by teacher-volunteers.

DIAGNOSIS AND TREATMENT OF THE ACUTE PHASE OF POLIOMYELITIS AND ITS COMPLICATIONS
Edited by
Albert G. Bowers, M.D.
Published by
Williams and Wilkins

Reviewed by: Eleanor Ring, O.T.R.

This book is compiled for doctors as a reference book in the treatment of polio in the acute phase with emphasis on the respiratory problem. Clearly and simply written but technical. Eleven out of fourteen of the contributing editors are members of the attending or consultant staff at the Los Angeles County Hospital where experienced teamwork has saved the lives of hundreds of bulbar polios —most of them severely involved.

For bulbospinal polio both early tracheotomy and early use of respirator are advocated. Medical management of

acute polio is discussed with particular attention to respiratory complications and biochemical changes.

A chapter on physical medicine in early polio is written by Dr. Elizabeth Austin while Dr. C. L. Lowman discusses the orthopedic treatment including bracing of the lower extremity.

(Note: There is no reference made to occupational therapy in the book.)

DECONTAMINATION OF ARTICLES MADE BY TUBERCULOUS PATIENTS IN PHYSICAL MEDICINE AND REHABILITATION

A Study Using Carboxide Gas

Louis B. Newman, Charlotte A. Colwell, and Elizabeth L. Jameson

The American Review of Tuberculosis and Pulmonary Diseases

Vol. 71, No. 2, February, 1955

Reviewed by: Minnie F. Witham, O.T.R.

Decontamination of articles made by tuberculous patients in occupational therapy is a major problem. The specialists at the Veterans Administration Hospital, Hines, Illinois, have found an effective way to handle this problem utilizing the nonexplosive, noninflammable gas, Carboxide. They discuss the problem and present the method and technique used successfully for the last four years.

The frequently used autoclave and ultraviolet light have their limitations—ineffectiveness or damage to materials. Carboxide has proved harmless to a wide variety of materials including oil paintings, leather, wool, metal, rubber and wood. The article is clearly illustrated and should be of major interest to every occupational therapist working with tuberculosis patients.

THE MENTAL HOSPITAL

A Study of Institutional Participation in Psychiatric Illness

Alfred H. Stanton, M.D., and Morris S. Schwartz, Ph.D.

Published by Basic Books, Inc. New York

1954 484 pp.

Reviewed by: Bertha J. Piper, O.T.R.

A penetrating analysis of the interpersonal dynamics concerning doctors, nurses, aides and patients, within a large mental sanitarium, is reported in this volume. Every phase of the hospital administration is explored for possible effects on the progress and recovery of patients, for example: patient-nurse relationships, treatment procedures and conflicting opinions, institutional needs, ward organization, complexities and constraints inevitably infringed upon each and every patient, the usurpation of power among staff members, and ward personnel conferences aimed at the solutions of various problems.

The data for this exhaustive study took three years to assemble at Chestnut Lodge Sanitarium, and the findings undoubtedly carry tremendous value to all hospital administrators.

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Staff position for registered occupational therapist. State hospital providing treatment and care for all types of psychiatric patients. 40 hour week; liberal paid holiday and vacation provisions. $3,600 starting salary with increases based on merit. Experience beyond requirement for registration not necessary. Apply Personnel Director, Utah State Hospital, Provo, Utah.

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Immediate opening for director of occupational therapy department. Salary open. Pleasant surroundings and working conditions. OT dept. now operating in the New Norfolk State Hospital Administration Building, with spacious quarters, new and modern equipment. Contact Dr. C. G. Ingham, Supt., Norfolk State Hospital, Norfolk, Nebraska.

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Female—chief occupational therapist: to conduct a program of activities for patient rehabilitation in surgical, general medicine, orthopedic and psychiatric clinics. Ability to originate, plan, and organize work projects; supervise staff therapists and participation in teaching program. Employee benefits of retirement plan, holiday, vacation and sick time. 40 hr. week. Apply Charles J. Weichert, Personnel Director, The Johns Hopkins Hospital, Baltimore 5, Maryland.

Occupational therapist, registered, for 500 bed general hospital. Small department that needs development. 40 hour week, starting salary $4000, with regular increases up to $5000. Write Melvin G. Carson, R.P.T., Director, Physical and Occupational Therapy Department, St. Joseph Infirmary, Louisville, Kentucky.

O.T.R. for neuropsychiatric unit of general hospital affiliated with medical school in eastern city. Active treatment program. Beginning salary for staff therapist $3320.00 per year. State retirement plan. Write Box 11, AJOT, 3514 N. Oakland Ave., Milwaukee 11, Wis.

Immediate openings for staff therapists in creative arts unit of adjunctive therapy department, The Menninger Foundation, Topeka, Kansas. Excellent opportunities for professional growth and psychiatric experience with adults. Well equipped working units. Clinical training program. Apply to Assistant Director, Adjunctive Therapy Department.

Wanted: Registered occupational therapist to direct present well established department. Salary $3276-$4056 depending upon qualifications. Paid vacation, sick leave and retirement plan. Maintenance available. Bangor State Hospital, Bangor, Maine.

Immediate opening for registered occupational therapist, psychiatric teaching hospital, 10 miles from Boston. Contact Head O.T.R. Metropolitan State Hospital, Waltham 54, Mass., for further details.

California: Applications now being accepted from occupational therapists in state correctional institutions (openings for men only) and in mental hospitals, education and public health (openings for men and women). Must be eligible for national registry of qualified occupational therapists. Graduates of recognized course start at $310, raises to $358. One year experience qualifies for $358-$436 range. Write State Personnel Board, 801 Capitol Avenue, Sacramento 14, Calif.

Occupational therapists for half-time position pediatric floor, County Hospital. Must be able to direct volunteers in diversional program. Give age, experience, references. Reply Junior League, Olympic Hotel, Seattle, Washington.

Registered occupational therapist for general hospital. Forty hour week, no cerebral palsy, tuberculosis or psychiatric work. Fifty per cent children's work, other fifty per cent general orthopedic and surgical problems. Registered physical therapist in town, at Cerebral Palsy Center. Salary open, liberal personnel policies. R. N. Brough, Executive Director, Holston Valley Community Hospital, Kingsport, Tenn.

Occupational therapist to work with limited number elderly women in a Home and with a community program. Salary, $3,300. Send full resume. Peabody Home, 2 Fifth Avenue, New York City.

Two registered therapists for large cerebral palsy outpatient center with total program. 5-day, 35-hour week. Uniforms and laundry provided. Salary $3480-4920. Vacations, sick leave, holidays. Write Coordinator, United Cerebral Palsy Assn., 380 Washington Avenue, Roosevelt, N. Y.

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Wanted: Registered occupational therapists. Salary range $3,168-$3,936 per year. Large mental hospital, located in historic Petersburg, Virginia. Excellent opportunities for advancement. Quarters for single persons available. Write Personnel Office, Central State Hospital, Petersburg, Virginia.

Wanted: Supervising and staff occupational therapists, male or female, for rehabilitation center in university teaching hospital. Write Harold N. Neu, M.D., Director, Rehabilitation Center, Creighton Memorial St. Joseph's Hospital, Omaha, Nebraska.

Occupational therapist for 500 bed general hospital. To set up, organize and operate new department. Salary open. Write: Personnel Director, Charles S. Wilson Memorial Hospital, 33-57 Harrison Street, Johnson City, New York.

Registered occupational therapist. Rehabilitation center located in the Pittsburgh area. Medical program directed by physiatrist. Close affiliation with University of Pittsburgh Medical Center. Salary commensurate with experience. Good personnel practices. Write Mr. Oscar Kurren, Director; Harmarville Convalescent and Rehabilitation Center, Harmarville, Pa.

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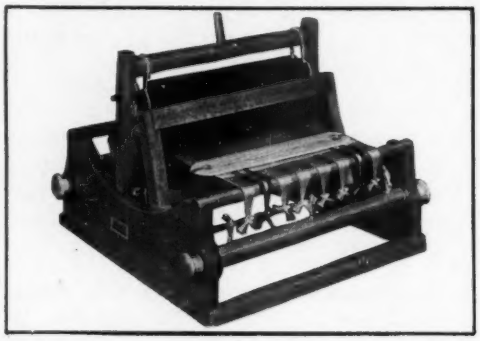

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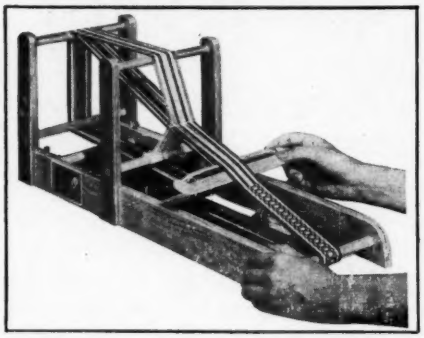

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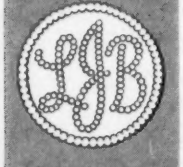

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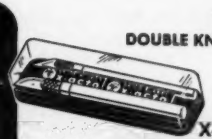

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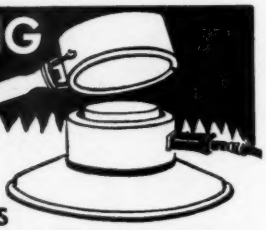

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